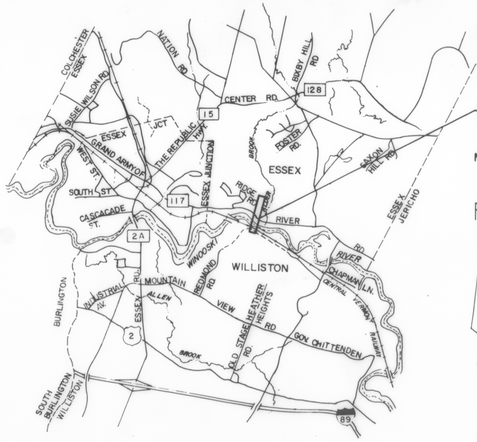
INDEX OF SHEETS

SHEET	1	TITLE SHEET
	2-6	TYPICAL SECTIONS
	7-12	R.O.W. DETAIL SHEETS
	13-21	R.O.W. LAYOUT SHEETS
	22-31	PROFILE SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
TOWNS OF ESSEX AND WILLISTON
COUNTY OF CHITTENDEN
CHITTENDEN COUNTY CIRCUMFERENTIAL HIGHWAY
VERMONT ROUTE 289 (F.A.P.)

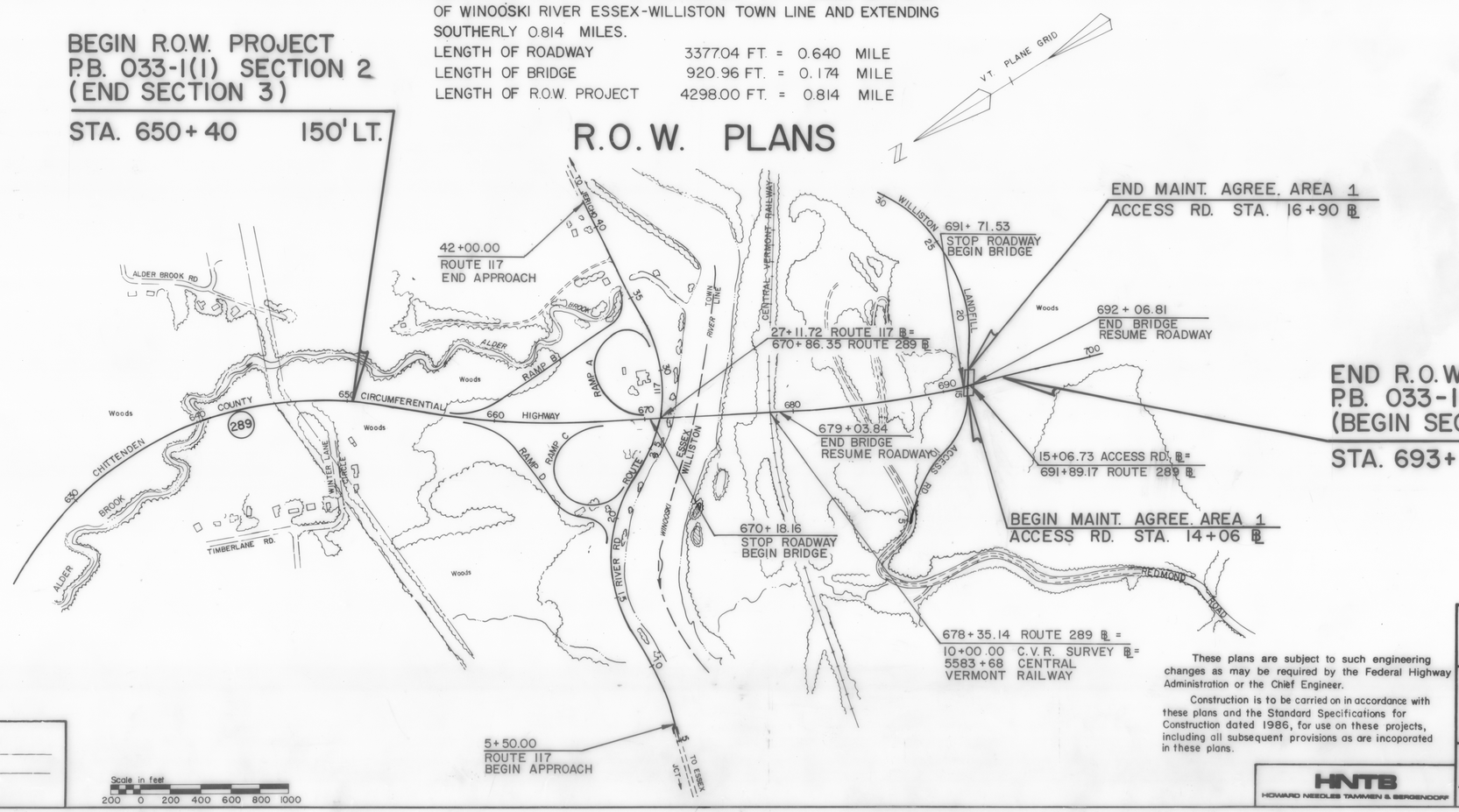
BEGINNING AT A POINT APPROXIMATELY 0.441 MILES NORTHERLY OF WINOOSKI RIVER ESSEX-WILLISTON TOWN LINE AND EXTENDING SOUTHERLY 0.814 MILES.

LENGTH OF ROADWAY	3377.04 FT. =	0.640 MILE
LENGTH OF BRIDGE	920.96 FT. =	0.174 MILE
LENGTH OF R.O.W. PROJECT	4298.00 FT. =	0.814 MILE

BEGIN R.O.W. PROJECT
P.B. 033-1(1) SECTION 2
(END SECTION 3)

STA. 650+40 150' LT.

R.O.W. PLANS



END R.O.W. PROJEC
P.B. 033-1(1) SECT
(BEGIN SECTION 1)

STA. 693+38 210

CONVENTIONAL SIGNS

COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS
FENCE LINE
STONE WALL
TRAVELED WAY
GUARD RAIL
RAILROAD
SURVEY LINE
CULVERT
POWER POLE
TELEPHONE POLE
TREES
CONTROL OF ACCESS
PROPERTY LINE
R O W TAKING LINE
SLOPE RIGHTS SR
TOP OF CUT
TOE OF SLOPE

DATUM
VERTICAL
HORIZONTAL

Scale in feet
200 0 200 400 600 800 1000

These plans are subject to such engineering changes as may be required by the Federal Highway Administration or the Chief Engineer.

Construction is to be carried on in accordance with these plans and the Standard Specifications for Construction dated 1986, for use on these projects, including all subsequent provisions as are incoporated in these plans.

HNTB
HOWARD NEEDLES TAMMEN & BERGENDOFF

SUBMITTED BY ORDER O
APPROVED
DIRECTOR OF ENGI
APPROVED
RIGHT OF W
PROJECT
WILLISTON - COLCHESTER
SHEET 1

BRUNING 44-131 40592-1

D-10

SEEDING FORMULA, ITEM 651.15

RURAL AREAS

%WT.	lbs/A	NAME	PUR. %	GERM %
3.33	2	CROWN VETCH	97	75
50.00	30	CREEPING RED FESCUE	98	85
8.33	5	TIMOTHY	99	85
16.67	10	PERENNIAL RYE GRASS (VAR. PENNFINE)	95	85
8.34	5	ALFALFA (VAR. SARANAC)	99	85
8.33	5	BIRDSFOOT TREFOIL (VAR. EMPIRE)	98	85
5.00	3	HIGHLAND BENT GRASS	92	85
100.00	60			

THE SEED MIXTURE SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE FROM ALL NOXIOUS WEED SEED.

HAY MULCH, ITEM 651.25, TO BE PLACED ON ALL EARTH SLOPES AT THE RATE OF TWO TONS PER ACRE, OR AS DIRECTED BY THE ENGINEER.

FERTILIZER, ITEM 651.18, SHALL BE MIXED AS FOLLOWS:

NITROGEN	10%
PHOSPHORUS	20%
POTASH	10%

FERTILIZER SHALL BE DELIVERED IN BAGS OF NOT TO EXCEED 100 LBS. EACH AND IS TO BE APPLIED AT THE RATE OF 500 LBS. PER ACRE OR AS DIRECTED BY THE ENGINEER.

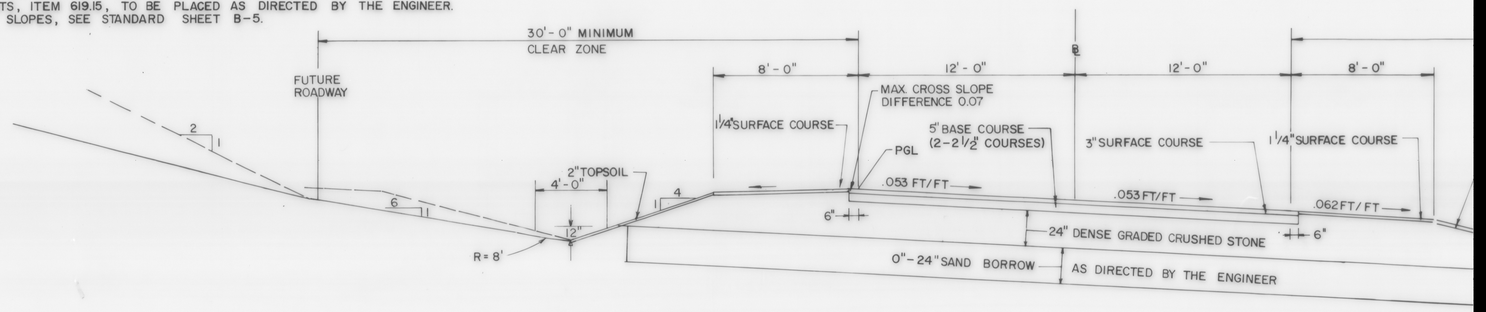
AGRICULTURAL LIMESTONE, ITEM 651.20, TO BE APPLIED TO ALL SLOPES AT THE RATE OF TWO TONS PER ACRE OR AS DIRECTED BY THE ENGINEER.

WOOD MARKER POSTS, ITEM 619.15, TO BE PLACED AS DIRECTED BY THE ENGINEER.

FOR ROUNDING OF SLOPES, SEE STANDARD SHEET B-5.

TYPICAL SECTIONS

3" BITUMINOUS CONCRETE PAVEMENT - 1 1/4" TYPE III WEARING COURSE, 1 3/4" TYPE II
5" BITUMINOUS CONCRETE PAVEMENT, TYPE I - BASE COURSE 2 - 2 1/2" COURSES
24" SUBBASE OF DENSE GRADED CRUSHED STONE
SHOULDERS 1 1/4" BITUMINOUS CONCRETE PAVEMENT
0" TO 12" GRANULAR BORROW (IN FILLS) } AS DIRECTED BY THE ENGINEER
0" TO 24" SAND BORROW (IN CUTS)



MAXIMUM BANKED SECTION FOR STATIONS
642+00 TO STA.647+50
(CUT)

SCALE: 1/4" = 1'-0" VERT.
1/4" = 1'-0" HORZ.

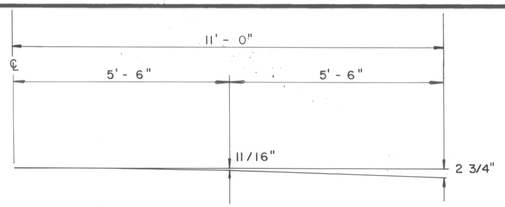


MAXIMUM BANKED SECTION FOR STATIONS
630+00 TO STA 631+50
633+00 TO STA 642+00
(FILL)

SCALE: 3/16" = 1'-0" VERT.
3/16" = 1'-0" HORZ.

DATUM
VERTICAL _____
HORIZONTAL _____

TYPICAL SECTIONS



PARABOLIC DETAILS

NOTE : TRAVEL LANES SHALL BE PARABOLIC

3" BITUMINOUS CONCRETE PAVEMENT – 1¼" TYPE III WEARING COURSE, 1¾" TYPE II BINDING COURSE
5" PLANT MIXED BASE COURSE – 2 – 2½" COURSES
24" SUBBASE OF DENSE GRADED CRUSHED STONE
SHOULDERS 1¼" BITUMINOUS CONCRETE PAVEMENT
0"-12" GRANULAR BORROW IN FILL (TO BE PLACED AS DIRECTED BY THE ENGINEER)

SEEDING FORMULA, ITEM 651.15
RURAL AREAS

% WT.	lbs/A	NAME	PUR. %	GERM %
3.33	2	CROWN VETCH	97	75
50.00	30	CREEPING RED FESCUE	98	85
8.33	5	TIMOTHY	99	85
16.67	10	PERENNIAL RYE GRASS (VAR. PENNFINE)	95	85
8.34	5	ALFALFA (VAR. SARANAC)	99	85
8.33	5	BIRDSFOOT TREFOIL (VAR. EMPIRE)	98	85
5.00	3	HIGHLAND BENT GRASS	92	85
100.00	60			

THE SEED MIXTURE SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40 % BY WEIGHT AND SHALL BE FREE FROM ALL NOXIOUS WEED SEED.

HAY MULCH, ITEM 651.25, TO BE PLACED ON ALL EARTH SLOPES AT THE RATE OF TWO TONS PER ACRE, OR AS DIRECTED BY THE ENGINEER.

FERTILIZER, ITEM 651.18, SHALL BE MIXED AS FOLLOWS:

NITROGEN	10 %
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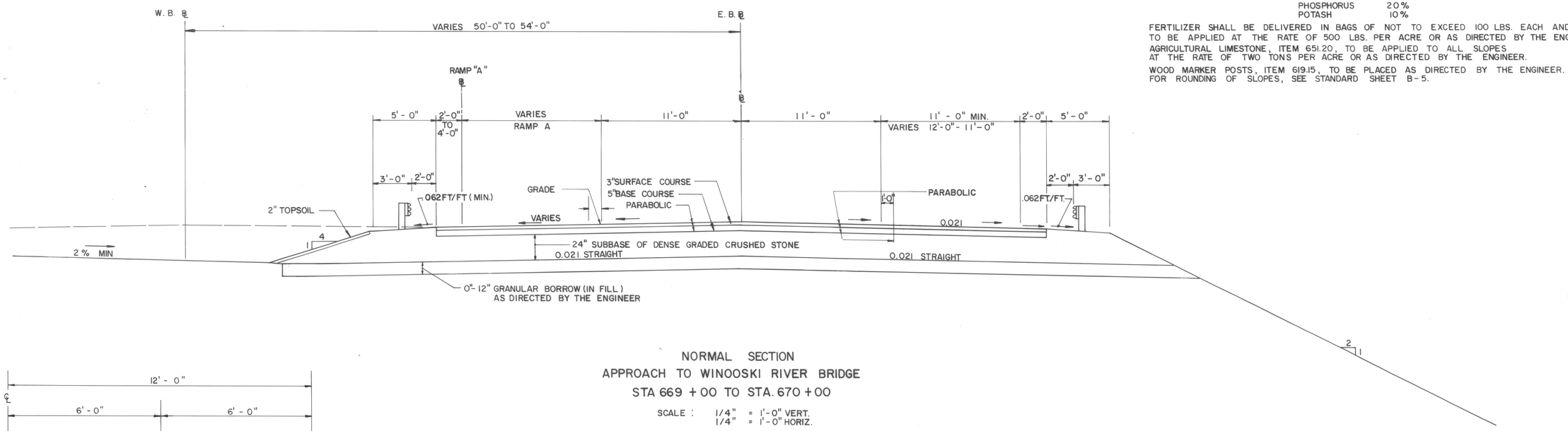
POTASH	10 %

FERTILIZER SHALL BE DELIVERED IN BAGS OF NOT TO EXCEED 100 LBS. EACH AND IS TO BE APPLIED AT THE RATE OF 500 LBS. PER ACRE OR AS DIRECTED BY THE ENGINEER.

AGRICULTURAL LIMESTONE, ITEM 651.20, TO BE APPLIED TO ALL SLOPES AT THE RATE OF TWO TONS PER ACRE OR AS DIRECTED BY THE ENGINEER.

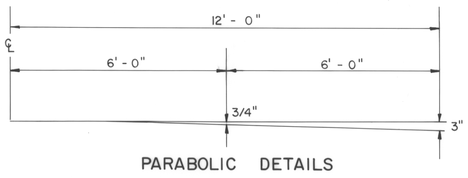
WOOD MARKER POSTS, ITEM 619.15, TO BE PLACED AS DIRECTED BY THE ENGINEER.

FOR ROUNDING OF SLOPES, SEE STANDARD SHEET B-5.

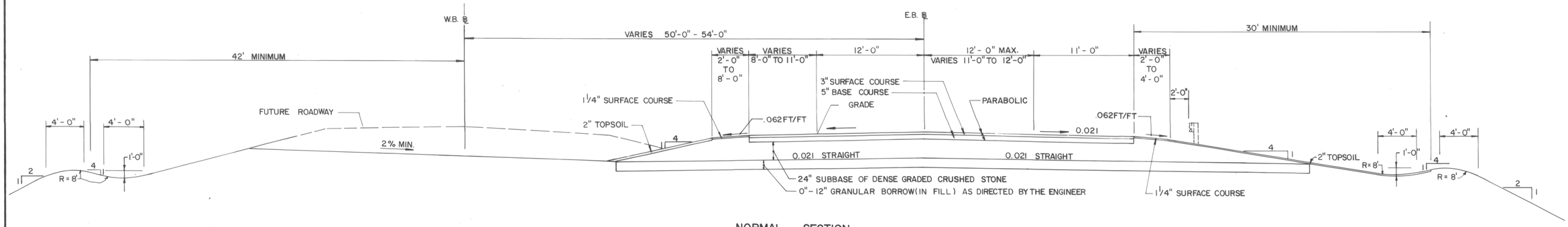


NORMAL SECTION
APPROACH TO WINOOSKI RIVER BRIDGE
STA 669 + 00 TO STA. 670 + 00

SCALE : 1/4" = 1'-0" VERT.
1/4" = 1'-0" HORIZ.



PARABOLIC DETAILS

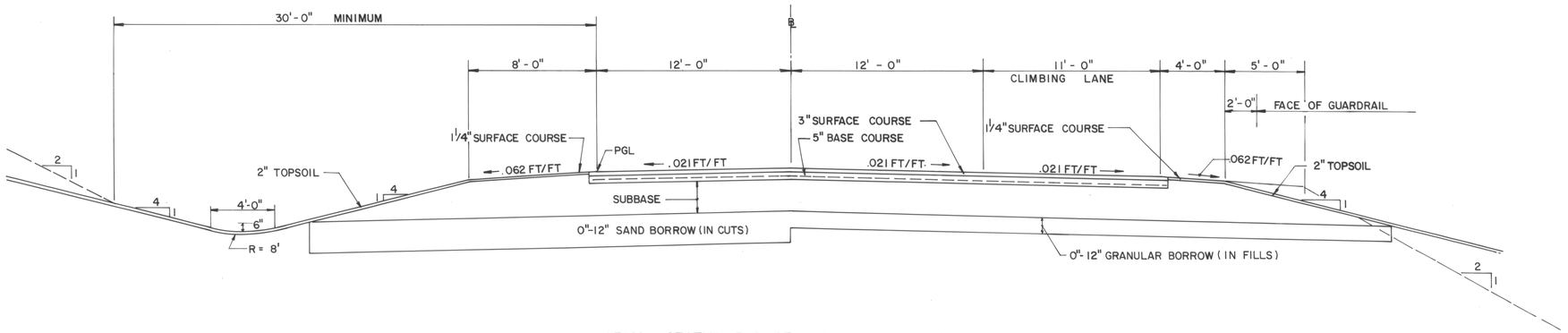


NORMAL SECTION
APPROACH TO WINOOSKI RIVER BRIDGE
TRANSITION SECTION AT STA. 680 + 00

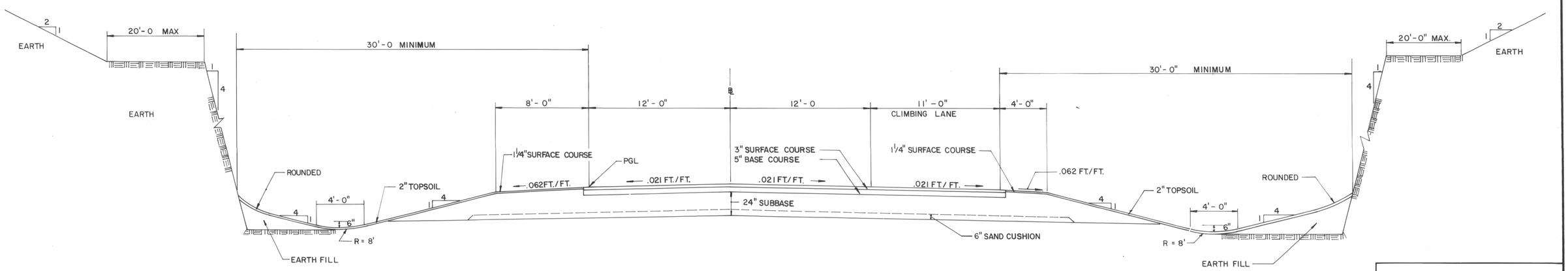
DATUM
VERTICAL _____
HORIZONTAL _____

SURVEYED BY PINKHAM ENG. DATE 6/86
DRAWN BY S.K.O. DATE 1/87
TRACED BY N.P.D. DATE 2/87

VERMONT ROUTE 289 (F.A.P.)
TOWNS OF ESSEX AND WILLISTON
PROJ WILLISTON-COLCHESTER NO. PB 033-1(1)
SHEET 3 OF 31



NORMAL SECTION FOR STA 693+00 TO STA 706+00
CUT & FILL



NORMAL SECTION FOR STA 693+00 TO STA 706+00
ROCK CUT

DATUM
VERTICAL _____
HORIZONTAL _____

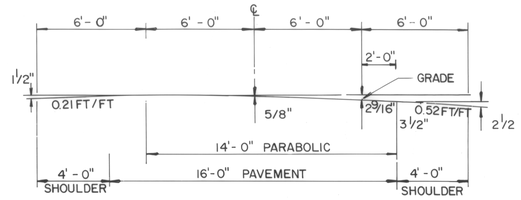
SURVEYED BY PINKHAM ENG. DATE 6/86
DRAWN BY S. K. O. DATE 1/87
TRACED BY N. P. D. DATE 2/87

CIRCUMFERENTIAL HIGHWAY
TOWN OF WILLISTON
PROJ. WILLISTON - COLCHESTER NO. PB 033-1(1)

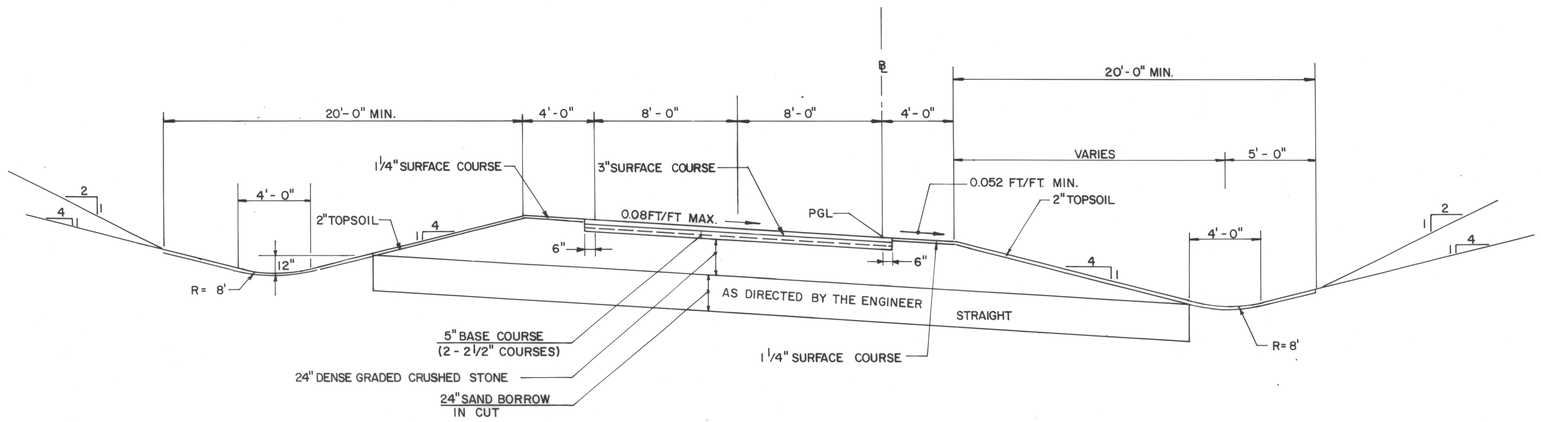
SHEET 4 OF 31

RAMP TYPICAL SECTIONS

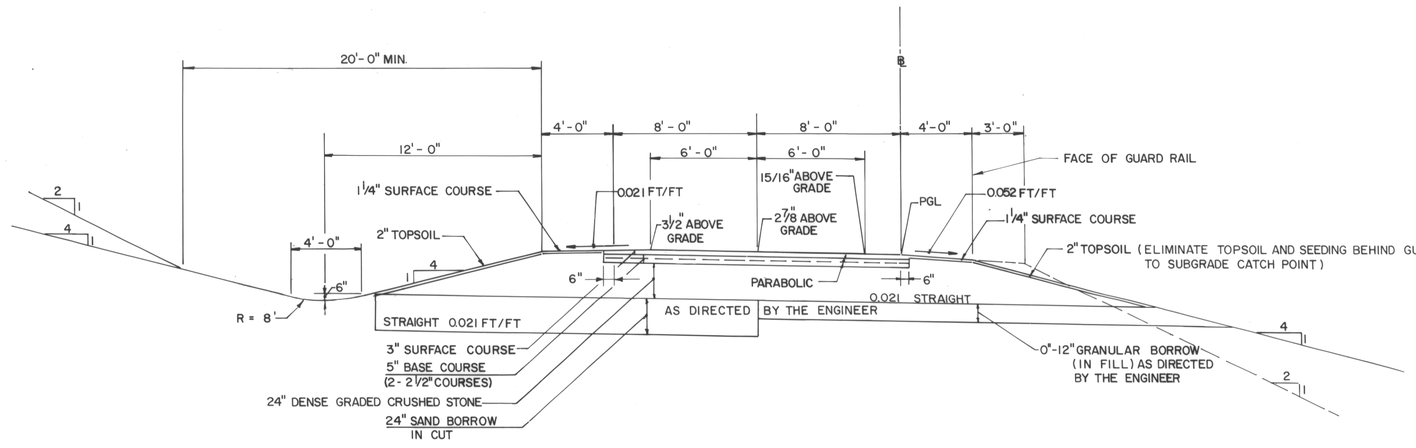
3" BITUMINOUS CONCRETE PAVEMENT — 1 1/4" TYPE III WEARING COURSE, 1 3/4" TYPE BINDING COURSE
5" PLANT MIXED BASE COURSE - 2 – 2 1/2" COURSES
24" SUBBASE OF DENSE GRADED CRUSHED STONE
SHOULDERS 1 1/4" BITUMINOUS CONCRETE PAVEMENT
0"-12" GRANULAR BORROW IN FILL (TO BE PLACED AS DIRECTED BY THE ENGINEER)



CROSS-SLOPE & PARABOLIC DETAIL



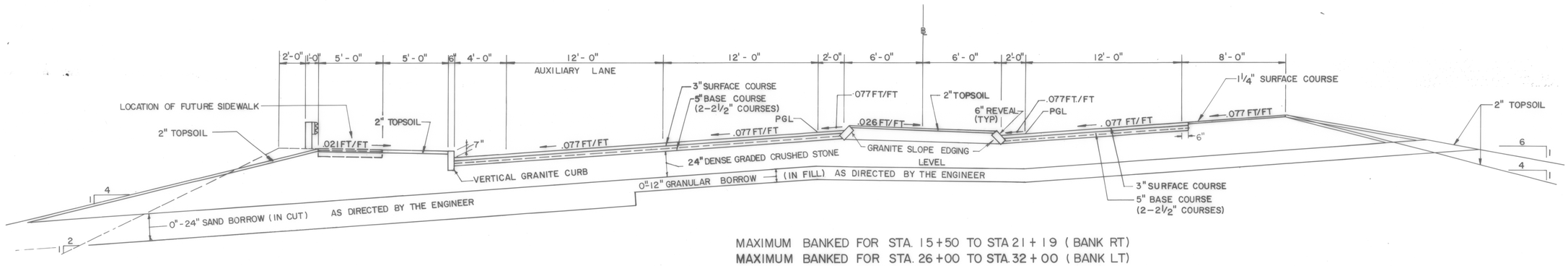
TYPICAL RAMP – BANKED SECTION
SCALE : 1/4" = 1'-0" VERT.
1/4" = 1'-0" HORZ.



TYPICAL RAMP - NORMAL SECTION
SCALE : 1/4" = 1'-0" VERT.
1/4" = 1'-0" HORZ.

DATUM
VERTICAL _____
HORIZONTAL _____

SURVEYED BY PINKHAM ENG. DATE 6/86
DRAWN BY S.K.O DATE 1/87
TRACED BY N.P.D DATE 2/87
VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX
PROJ. WILLISTON-COLCHESTER NO. PB 033-1(1)
SHEET 5 OF 31



MAXIMUM BANKED FOR STA. 15+50 TO STA 21+19 (BANK RT)
MAXIMUM BANKED FOR STA. 26+00 TO STA. 32+00 (BANK LT)
ROUTE 117

SCALE : 1/4" = 1'-0" VERT.
1/4" = 1'-0" HORIZ.

DATUM
VERTICAL _____
HORIZONTAL _____

SURVEYED BY PINKHAM ENG. DATE 6/86
DRAWN BY S.K.O DATE 1/87
TRACED BY N.P.D DATE 2/87
VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX
PROJ. WILLISTON-COLCHESTER NO. PB 033-1(1)
SHEET 6 OF 31

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
0201A	STATE OF VERMONT	13,14, 15,19	650+40 LT	671+30 LT	26.6 A±			CO	1-26-89	ESSEX	238	735-738	
			650+40 LT	RAMP B 3+00 RT		8.0 A±							LOSS OF ACCESS
			651+45 RT	RAMP D 15+51 RT		7.5 A±							LOSS OF ACCESS
			668+75 LT										SHED D-1
			669+40 LT										SILO D-2
			670+00 LT										BARN D-3
			RAMP D 15+55 RT±	669+75 LT ±									WATERLINE W-3
			670+77 LT ±										SEPTIC TANK D-7
			670+60 LT ±										FOUNDATION D-10
0201B		15,18, 19	RTE 117 22+61 RT	RTE 117 38+50 RT	1.0 A±								
			RTE 117 31+82 RT	RTE 117 32+18 RT			DITCH (P) (0.11 A±)						
			RTE 117 36+07 RT	RTE 117 37+47 RT			CHANNEL (P) (0.26 A±)						
0201C		19	RTE 117 38+50 RT	RTE 117 40+37 RT	0.11 A±								NON-LIMITED ACCESS
			RTE 117 30+00 RT	RTE 117 40+32 RT		6.86 A±							
			RTE 117 38+80 RT										18' GRAVEL DRIVE MP 0246
0201D		15,18, 19	RTE 117 22+61 RT	RTE 117 38+50 RT	2.2 A±		ALL R. T. & I.						HWY. EASE. VT RTE 117
0201E		19	RTE 117 37+10 LT	RTE 117 40+40 RT	0.29 A±		ALL R. T. & I.						NON-LIMITED ACCESS HWY. EASE. VT RTE 117
				TOTAL	30.20 A±	22.36 A±							
0202A	STATE OF VERMONT	15,18	RTE 117 20+80 LT	RTE 117 25+74 RT	1.1 A±	0.0 A±		WD	5-17-88	ESSEX	229	619-621	
			RTE 117 24+25 LT										HOUSE D-4
			661+85 RT ±	669+20 RT ±			ALL R. T. & I.						WATERLINE W-4
			RTE 117 23+85 LT ±										SEPTIC TANK D-8
0202B		15,18	RTE 117 21+61 RT	RTE 117 25+74 RT	0.23 A±		ALL R. T. & I.						HWY. EASE. VT RTE 117
				TOTAL	1.33 A±	0.0 A±							

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1.	9, 18	PARCEL 2-6; THOMAS: DELETE TEMP. CONST. EASE. RTE. 117 5+77 LT - 6+55 LT.	6/28/88	WSB	FCE
2.	10, 19	PARCEL 2-9; TOWN OF ESSEX: ADJUST TAKE LINE TO FOLLOW PRESENT EASEMENT LINE AND ELIMINATE STRIP TAKING ALONG FRONT. TAKE CUL. RT. CORRECT DETAIL SHEET.	8/10/88	WSB	FCE
3.	11, 15	PARCEL 2-14; TARRIER & BABCOCK: ADJUST TAKE LINE BETWEEN 671+63 RT AND 676+10 RT TO AVOID GRANITE AT 676+01 ET. REDUCE TAKE AREA. CORRECT DETAIL SHEET AND TOTAL AREA SKETCHES.	8/24/88	WSB	FCE
4.	9, 18	PARCEL 2-5; HAYDEN: CHANGE OWNERS NAME FROM HAYDEN THOMAS TO TRUAX, STEPHEN P. CHANGE IN OWNERSHIP.	9/20/88	WSB	FCE
5.	12, 15	PARCEL 2-15; CENTRAL VT. RAILROAD: CHANGE 0.69A TAKING TO A CROSSING EASE. (P). ADD CULVERT, DRIVE, DITCH AND SLOPE RTS. TO LAYOUT AND DETAIL SHEETS.	10/26/88	WSB	FCE
6.	12	PARCEL 2-18; CHAMPLAIN WATER DIST. DELETE FROM SECTION.	12/5/88	WSB	FCE
7.	12	PARCEL 2-19; VILLAGE OF ESSEX JCT. DELETE FROM SECTION.	12/5/88	WSB	FCE
8	12	PARCEL 2-22: GREEN MOUNTAIN CABLE TV CHANGED TO ADELPHIA CABLE COMMUNICATIONS CO. 8	4/19/89	STE	FCE
9	11, 15	PARCEL 2-14: LINDA TARRIER DECEASED. NAME DELETED FROM PLANS PER C.O. 10	5/2/89	STE	FCE

LEGEND

DR. RT. – DRAINAGE RIGHT
DIT. RT. – DITCHING RIGHT
CH. RT. – CHANNEL RIGHT
DRIVE RT. – DRIVE RIGHT
CUL. RT. – CULVERT RIGHT
(D) – DEMOLITION OR REMOVAL
[W] – WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINES
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

CONST. EASE. — CONST. EASEMENT
SR — SR — SLOPE RIGHTS
P — P — PROPERTY LINE
L — L — TOP OF CUT
TOE OF SLOPE

MADE BY: PSJ DATE 9/87
CHECKED BY: DRO DATE 9/87

APPROVED _____ DATE 7/6/88
RIGHT OF WAY DIRECTOR

PROJECT WILLISTON-COLCHESTER
NO. PB 033-1(1)
SHEET 7 OF 31

ROW

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
0203A	STATE OF VERMONT	14,15 18	RTE 117 14+50 LT	RAMP D 15+51 RT	6.7 A±			WD		ESSEX			
			RAMP D 20+00 ℄										HOUSE D-5
			RAMP D 22+25 LT										PRODUCE STAND D-6
			RAMP D 19+86 LT ±	RAMP D 19+95 RT ±									WATERLINE W-2
			RAMP D 20+70 LT ±										SEPTIC TANK D-9
			RAMP D 19+95 RT ±										WELL W-2
0203B		18	RTE 117 8+77 LT	RTE 117 14+50 LT	0.69 A±								NON-LIMITED ACCESS
			RTE 117 8+77 LT	RAMP D 15+51 RT		55.0 A±							
			RTE 117 13+73 LT	RTE 117 14+30 LT			CONST. EASE. (T) (0.02 A±)						(600 SF±)
0203C		18	RTE 117 6+77 RT	RTE 117 14+50 RT	0.42 A±								NON-LIMITED ACCESS
			RTE 117 6+77 RT	RTE 117 13+00 RT		0.77 A±							
			RTE 117 9+57 RT	RTE 117 10+22 RT			DITCH (P) (0.10 A±)						
			RTE 117 7+09 RT	RTE 117 9+00 RT			SLOPE (T) (0.06 A±)						(2764 SF±)
			RTE 117 6+77 RT	RTE 117 9+40 RT			CONST. EASE (T) (0.05 A±)						(2300 SF±)
0203D		18	RTE 117 14+50 RT	RTE 117 22+61 RT	0.44 A±								
0203E		18	RTE 117 6+77 RT	RTE 117 14+50 RT	0.77 A±		ALL R. T. & I.						NON-LIMITED ACCESS HWY. EASE. VT RTE 117
0203F		18	RTE 117 14+50 RT	RTE 117 22+61 RT	0.84 A±		ALL R. T. & I.						HWY. EASE. VT RTE. 117
				TOTAL	9.86 A±	55.77 A±							

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY

LEGEND

DR. RT. - DRAINAGE RIGHT
DIT. RT. - DITCHING RIGHT
CH. RT. - CHANNEL RIGHT
DRIVE RT. - DRIVE RIGHT
CUL. RT. - CULVERT RIGHT
(D) - DEMOLITION OR REMOVAL
[W] - WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINES
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

CONST. EASE. — CONST. EASEMENT
SR — SR — SLOPE RIGHTS
P — P — PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

MADE BY: PSJ DATE 9/87
CHECKED BY: DRO DATE 9/87

APPROVED _____ DATE 7/6/98
RIGHT OF WAY DIRECTOR

PROJECT WILLISTON-COLCHESTER
NO. PB 033-1(1)
SHEET 8 OF 31

ROW

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
0204	NOT USED												
0205	TRUAX, STEPHEN P.	18	RTE 117 5+50 LT	RTE 117 5+77 LT	0.02 A±	0.69 A±	ALL R. T. & I.	WD		ESSEX			(675 SF±) NON-LIMITED ACCESS, HWY. EASE. VT RTE 117
0206	STATE OF VERMONT	18	RTE 117 5+77 LT	RTE 117 6+77 LT	0.06 A±	0.69 A±	ALL R. T. & I.	WD	11-16-88	ESSEX	237	117-119	(2500 SF±) NON-LIMITED ACCESS, HWY. EASE. VT RTE 117
0207A	KAUSHAL, KAMLA	18	RTE 117 6+77 LT	RTE 117 8+77 LT	0.03 A±	1.35 A±		WD		ESSEX			(1000 SF±) NON-LIMITED ACCESS
			RTE 117 7+67 LT RTE 117 7+80 LT	RTE 117 8+77 LT			SLOPE (T) (0.05 A±) DRIVE (T)						(2183 SF±) 18' BIT. CONC. DRIVE MP 0187
			RTE 117 7+50 LT	RTE 117 8+77 LT			CONST. EASE. (T) (0.02 A±)						(950 SF±)
0207B		18	RTE 117 6+77 LT	RTE 117 8+77 LT	0.11 A±		ALL R. T. & I.	WD		ESSEX			NON-LIMITED ACCESS HWY. EASE. VT RTE 117
0207C		18	RTE 117 7+45 LT	RTE 117 8+19 LT			CULVERT & DRAINAGE RIGHT	WD		ESSEX			
				TOTAL	0.14 A±	1.35 A±							
0208A	MOREAU, STEPHEN J. & DAYLE A. (H&W)	18	RTE 117 5+50 RT	RTE 117 6+77 RT	0.04 A±	8.9 A±		WD		ESSEX			(1905 SF±) NON-LIMITED ACCESS
			RTE 117 5+86 RT RTE 117 5+60 RT	RTE 117 6+44 RT RTE 117 6+77 RT			SLOPE (T) (0.01 A±) CONST. EASE. (T) (0.02 A±)						(142 SF±) (950 SF±)
0208B		18	RTE 117 5+50 RT	RTE 117 6+77 RT	0.07 A±		ALL R. T. & I.						(3175 SF±) NON-LIMITED ACCESS, HWY. EASE. VT RTE 117
				TOTAL	0.11 A±	8.9 A±							

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CH. RT. - CHANNEL RIGHT
DRIVE RT. - DRIVE RIGHT
CUL. RT. - CULVERT RIGHT
(D) - DEMOLITION OR REMOVAL
[W] - WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINES
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

CONST. EASE. — CONST. EASEMENT
SR — SR — SLOPE RIGHTS
P — P — PROPERTY LINE
L — L — TOP OF CUT
TOE OF SLOPE

MADE BY: PSJ DATE 9/87
CHECKED BY: DRO DATE 9/87

APPROVED _____ DATE 7/6/89
RIGHT OF WAY DIRECTOR

PROJECT WILLISTON-COLCHESTER
NO. PB 033-1(1)
SHEET 9 OF 31

ROW

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
0209A	STATE OF VERMONT	19	RTE 117 36+53 LT RTE 117 36+27 LT RTE 117 36+88 LT RTE 117 36+61 LT **RTE 117 36+68 LT**	RTE 117 37+10 LT RTE 117 36+93 LT RTE 117 37+54 LT **RTE 117 37+52 LT**	0.03 A±		CHANNEL (P) (0.13 A±) SLOPE (T) (0.02 A±) **CULVERT (T)**	WD	11-02-88	ESSEX	236	573-574	(1375 SF±) HWY. EASE. VT. RTE. 117 (710 SF±) DRIVEN WELL
0209B		19	RTE 117 37+10 LT	RTE 117 37+52 LT	0.02 A±								(1038 SF±) NON-LIMITED ACCESS HWY. EASE. VT. RTE. 117
			RTE 117 36+53 LT RTE 117 37+40 LT	RTE 117 37+52 LT		0.28 A±	DRIVE (T)						20' BIT. CONC. DRIVE W/TURNAROUND MP 0243
													UTILITY
				TOTAL	0.05 A±	0.28 A±							
0210A	STEINER, PAUL F. & ELISABETH (H & W)	19	RTE 117 37+52 LT	RTE 117 40+53 LT	0.16 A±			WD		ESSEX			NON-LIMITED ACCESS
			RTE 117 37+53 LT RTE 117 35+89 LT RTE 117 37+54 LT RTE 117 38+60 LT	RTE 117 40+53 LT RTE 117 36+51 LT RTE 117 38+25 LT		22.8 A±	CHANNEL (P) (0.04 A±) SLOPE (T) (0.01 A±)						(1800 SF±) (225 SF±) 16' BIT. CONC. DRIVE MP 0246
			RTE 117 37+54 LT	RTE 117 40+54 LT			CONST. EASE (T) (0.06 A±)						(2565 SF±)
0210B		19	RTE 117 37+50 LT	RTE 117 40+47 LT	0.17 A±		ALL R. T. & I.						NON-LIMITED ACCESS HWY. EASE. VT. RTE 117
				TOTAL	0.33 A±	22.8 A±							

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(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

CONST. EASE. CONST. EASEMENT
SR SR SLOPE RIGHTS
P L P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

MADE BY: PSJ DATE 9/87
CHECKED BY: DRO DATE 9/87

APPROVED _____ DATE 7/16/88
RIGHT OF WAY DIRECTOR

PROJECT WILLISTON-COLCHESTER
NO. PB 033-1(1)
SHEET 10 OF 31

ROW

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
0211A	STATE OF VERMONT	19	RTE 117 40+47 LT	RTE 117 42+00 LT	0.10 A±			WD	10-13-88	ESSEX	236	94-96	
			RTE 117 40+53 LT RTE 117 41+30 LT	RTE 117 42+00 LT		0.93 A±	DRIVE (T)						18' DRIVE MP 0251
0211B		19	RTE 117 40+47 LT	RTE 117 42+00 LT	0.09 A±		ALL R. T. & I.						(3825 SF±) NON-LIMITED ACCESS HWY. EASE. VT RTE 117
			RTE 117 41+07 LT										WELL W-6
				TOTAL	0.19 A±	0.93 A±							
0212A	STATE OF VERMONT	19	RTE 117 40+32 RT RTE 117 40+70 RT	RTE 117 42+00 RT	0.10 A±	1.7 A±	DRIVE (T)	CO	1-26-89	ESSEX	238	735-738	12' GRAV. DRIVE MP 0250
0212B		19	RTE 117 40+37 RT	RTE 117 42+00 RT	0.13 A±		ALL R. T. & I.						NON-LIMITED ACCESS HWY. EASE. VT RTE 117
				TOTAL	0.23 A±	1.7 A±							
0213	NOT USED												
0214	**BABCOCK, ANNETTE**	15	674+80 RT 674+80 RT 675+15 LT 676+15 RT 677+00 RT	677+85 RT 677+85 RT 677+82 LT 677+86 RT 677+85 RT	1.9 A±	30.3 A± 166.2 A±	CONST. EASE. (T) (0.04 A±) SLOPE (T) (0.01 A±)	WD		WILLISTON			LOSS OF ACCESS (1750 SF±) (325 SF±)
				TOTAL	1.9 A±	196.5 A±							

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P — P — PROPERTY LINE
L — L
TOP OF CUT
TOE OF SLOPE

MADE BY: PSJ DATE 9/87
CHECKED BY: DRO DATE 9/87

APPROVED _____ DATE 7/6/88
RIGHT OF WAY DIRECTOR

PROJECT WILLISTON-COLCHESTER
NO. PB 033-1(1)
SHEET 11 OF 31

ROW

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
0215	CENTRAL VERMONT RAILWAY, INC.	15	677+82 LT	678+85 RT			CROSSING EASE.(P)(0.69A±)						
			CVR 7+25 LT	CVR 11+15 LT			DITCH (P) (0.27 A±)						
			CVR 9+30 LT	CVR 10+65 LT			SLOPE (P) (0.04 A±)						(1536SF±)
			677+86 RT	678+86 RT			CONST. EASE. (T) (0.02 A±)						(1040SF±)
			677+83 RT	678+85 RT			CULVERT (P)						
			677+85 RT	678+86 RT			DRIVE (P)						ACCESS RD.
			677+85 RT	678+50 RT			SLOPE (T) (0.01 A±)						(486 SF ±)
0216A	TOWN OF WILLISTON	15,16, 17	678+80 LT	693+38 LT	9.0 A±								
			678+85 RT	692+13 RT		39.2 A±							
			678+82 LT	693+38 LT		36.8 A±							
			678+82 LT	678+93 LT			SLOPE (T) (0.01 A±)						(450 SF±)
			678+93 LT	679+00 LT			CONST. EASE. (T) (0.01 A±)						(630 SF±)
			679+00 LT	684+24 LT			CONST. EASE. (T) (0.13 A±)						(5,770 SF±)
			679+87 LT	684+05 LT			SLOPE (T) (0.01 A±)						(4,410 SF±)
			679+05 RT	685+15 RT			SLOPE (T) (0.19 A±)						(8,430 SF±)
			678+85 RT	685+28 RT			CONST. EASE. (T) (0.19 A±)						(8,250 SF±)
			685+48 LT	692+60 LT			CONST. EASE. (T) (0.22 A±)						(9,840 SF±)
			685+63 LT	692+56 LT			SLOPE (T) (1.85 A±)						
			686+28 RT	690+98 RT			CONST. EASE. (T) (0.15 A±)						(6,530 SF±)
			686+43 RT	691+43 RT			SLOPE (T) (0.85 A±)						
			691+10 RT	692+14 RT			CONST. EASE. (T) (0.05 A±)						(2,210 SF±)
			691+14 RT	691+92 RT			SLOPE (T) (0.05 A±)						(1,970 SF±)
			692+03 RT	692+13 RT			SLOPE (T) (0.01 A±)						(30 SF±)
0216B		20	692+54 LT	692+85 LT			SLOPE (T) (0.01 A±)						(600 SF±)
			692+65 LT	692+99 LT			CONST. EASE. (T) (0.02 A±)						(1,025 SF±)
			ACCESS RD. 3+20℄	ACCESS RD. 14+06℄			RIGHT TO CONSTRUCT (T)						LANDFILL ACCESS RD. NON-LIMITED ACCESS
0216C		21	ACCESS RD. 16+90℄	ACCESS RD. 30+90℄			RIGHT TO CONSTRUCT (T)						LANDFILL ACCESS RD. NON-LIMITED ACCESS
				TOTAL	9.0 A±	76.0 A±							
0217	GREEN MOUNTAIN POWER CORPORATION												UTILITY
0218	DELETED												
0219	DELETED												
0220	U.S. SPRINT												UTILITY
0221	NEW ENGLAND TELEPHONE & TELEGRAPH												UTILITY
0222	ADELPHIA CABLE COMMUNICATIONS												UTILITY
	MAINTENANCE AGREEMENT AREA 1.	17	ACCESS RD. 14+06℄	ACCESS RD. 16+90℄									WILLISTON LANDFILL ACCESS ROAD

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TOE OF SLOPE

MADE BY: PSJ DATE 11/87
CHECKED BY: DRO DATE 11/87

APPROVED [signature] DATE 7/6/88

PROJECT WILLISTON-COLCHESTER
NO. PB 033-1(1)
SHEET 12 OF 31

ROW

VT. PLANE GRID

N724,500 E353,000 N724,000 E352,500 N723,500 N725,000 E353,000 E352,000 N724,000 E352,500 N725,000 E352,000 N724,500

4' HIGH WOVEN WIRE FENCE
CCCH STA 640+00, 234' LT. – CCCH STA 640+95, 145' LT
CCCH STA 642+66, 148' LT. – CCCH STA 643+50, 150' LT
CCCH STA 643+50, 150' LT. – CCCH STA 650+40, 150' LT
CCCH STA 650+40, 150' LT. – CCCH STA 654+00, 165' LT

4' HIGH CHAIN LINK FENCE
CCCH STA 640+00, 150' RT – STA 645+00, 150' RT
CCCH STA 645+00, 150' RT – CCCH STA 646+39, 150' RT
CCCH STA 646+50, 170' RT – STA 652+50, 170' RT
CCCH STA 652+50, 170' RT – CCCH STA 654+00, 163' RT

STA 643+00 LT TO STA 643+50 LT
NEW 4'x150' SPECIAL DITCH WITH STONE FILL TYPE I

STONE FILL TYPE IV

TEMPORARY STREAM RELOCATION

STA 637+50 LT TO STA 642+15 LT
NEW 4'x560' SPECIAL DITCH WITH STONE FILL TYPE I

PRIOR TO PLACING BACKFILL, UNSUITABLE MATERIAL TO BE REMOVED AS DIRECTED BY THE ENGINEER

STA 642+50 TO STA 645+50 RT
NEW 6"x 300' UNDERDRAIN WITH FLUSHING BASIN @ STA 642+50

PI CURVE 5B
STA 644+17.65 BACK =
STA 644+00.29 AHEAD

4" Blowoff

12" Water

Alder Brook

APPROXIMATED LOCATION OF WATERLINE (VILLAGE OF ESSEX JUNCTION)

Woods

STA 645+60 TO STA 646+50 LT
NEW 6" x 290' UNDERDRAIN WITH FLUSHING BASIN @ 645+60

STA 646+68, 160' LT
CAP EXISTING 12" WATER

STA 648+60 TO STA 651+50 LT
NEW 6"x 290' UNDERDRAIN WITH FLUSHING BASIN @ STA 648+60

BEGIN R.O.W. PROJECT
PB 033-1(1) SECTION 2
(END SECTION 3)
STA. 650+40 150'LT.

STEINER

653+00
235'LT

271'

121'

STA 651+60 TO STA 654+50 LT
NEW 6"x 290' UNDERDRAIN WITH FLUSHING BASIN @ STA 651+60

654+00
165'LT

020
1A

PINEWOOD MANOR INC.

244'

85-SB-62

3' WIDE TOP OF VISUAL BARRIER BERM

85-SB-60

85-SB-61

STA 641+90 LT TO STA 643+35 LT
NEW 18"x175' CSP

MATCH LINE

STA 640+00

Trans Tower Foundation

STA 645+50 LT. TO STA 645+75 RT.
NEW 18" x 59' RCP CLASS III

STA 648+50 LT TO STA 648+50 RT
NEW 18" x 57' RCP CLASS III

STA 649+50 LT TO STA 650+00 RT
NEW 18" x 35' RCP CLASS III

Box

COMPAN NET#6

VERMONT ROUTE 289

CHAMPLAIN Trail

STA 641+90 RT TO STA 641+90 RT
NEW 18"x60' RCP

STA 645+75 TO STA 648+50 RT
NEW 18"x 273' RCP CLASS III

REMOVE

STA 645+90 TO STA 648+50 RT
NEW 6" x 260' UNDERDRAIN W/FLUSHING BASIN @ STA 646+90

CB

WSO

15" PVC

WG

GMP #6 NET#5

GUY

BOX

STA 649+94 TO STA 651+50 RT
NEW 30"x 154' RCP CLASS III

650 S38°45'23"W 651

85-AB-5

652

653

85-HB-69F

4'

STA. 654+00

MATCH LINE

E 352,000

651+21
80'RT

651+50
80'RT

NEW 30" x 148' RCP CLASS III

76'

Rebar

STA 649+94 RT TO STA 651+45 RT
NEW 18" x 101' CSP WITH 2-18" CSP ELBOWS

651+45
150'RT

106'

636'

Woods

STA 652+73 RT TO STA 653+00 RT
NEW 18" x 105' CSP WITH 2-18" CSP ELBOWS

652+50
170'RT

STA 651+60 TO STA 654+50 RT
NEW 6"x 290' UNDERDRAIN W/FLUSHING BASIN @ STA 651+60

STA 653+00 TO STA 654+50 RT
NEW 30"x 148' RCP CLASS III

ABBOTT

STA 649+31 RT TO STA 649+89 RT
NEW 18" x 82' RCP CLASS III

STA 649+58, 157' RT
CAP EXISTING 12" WATER

STA 642+00 TO STA 645+75 RT
NEW 6" x 375' UNDERDRAIN W/FLUSHING BASIN @ STA 642+00

Woods

STA 638+50 RT TO STA 642+50 RT
NEW 4'x400' SPECIAL DITCH WITH STONE FILL TYPE I

APPROXIMATED LOCATION OF 12" WATER LINE (CHAMPLAIN WATER DISTRICT)

STA 646+00 RT TO STA 649+89 RT, GRASS LINED SPECIAL DITCH
2' WIDE – STA 646+00 TO STA 648+00, 3' WIDE – STA 648+00 TO STA 649+89

CCCH 640+32 =
10+00.00 CHANNEL ASKEW 43°-00' LT TO TANGENT
NEW TWIN 10'-0" x 15'-0" x 542' R.C. CULVERT

SPIRAL DATA 5B

D	= 3°
Θs	= 2.25°
p	= 0.49'
K	= 75.00'
X	= 149.97'
Y	= 1.96'
LT	= 100.01'
ST	= 50.01'
Lc	= 149.99'

CURVE 5B DATA CCCH

D	= 3°
R	= 1909.86'
Δ	= 27°07'10.19"
Δc	= 24°52'10.40"
TI	= 461.70'
Ts	= 534.66'
Es	= 55.01'
L	= 829.00'
Ls	= 150.00'
T2	= 421.25'

STA 648+50 TO STA 649+94 RT
NEW 24"x 142' RCP CLASS III

STA 648+60 TO STA 651+50 RT
NEW 6"x 290' UNDERDRAIN WITH FLUSHING BASIN @ STA 648+60

CB

R=50'

Conc. Curb

2" Water

Winterlane Circle

Trail

GMP #5 NET#4

House

Garage

DATUM
VERTICAL _____
HORIZONTAL _____

R. O. W. PLANS

SURVEYED BY PINKHAM ENG. DATE 6/87
DRAWN BY P.S.J. DATE 7/87
TRACED BY N.P.D. DATE 8/87

VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX
PROJ. WILLISTON – COLCHESTER NO. PB 033-1(1)
SHEET 13 OF 31

STEINER, PAUL F. & ELISABETH

VT PLANE GRID

N 723,500

STEINER BROOK

E 352,000

N 723,000

4' HIGH CHAIN LINK FENCE
CCCH STA 654+00, 163' RT. – RAMP D STA 1+00, 105' RT.

4' HIGH WOVEN WIRE FENCE
CCCH STA 654+00, 165' LT. – CCCH STA 658+00, 180' LT.
RAMP B STA 6+00, 67' RT. – RAMP B STA 9+50, 55' RT.
RAMP B STA 9+50, 55' RT. – CCCH STA 658+00, 180' LT.
RAMP D STA 1+00, 105' RT. – RAMP D STA 7+00, 105 RT.

GUARD RAIL STD. STEEL BEAM W/WOOD POSTS TYPE II
RAMP B STA 6+75 – RAMP B STA 9+25, RT.

654+00
165'LT

392'

658+00
180'LT

CURVE B-2 DATA
D = 11°27'32.96"
R = 500'
Δ = 40°12'27.54"
L = 350.88'
T = 183.01'

STA 656+55 TO RAMP B STA 13+00
NEW 6"x 260' UNDERDRAIN WITH
FLUSHING BASIN @ STA 656+55

STA 654+60 TO STA 656+50 LT.
NEW 6"x 190' UNDERDRAIN WITH
FLUSHING BASIN @
STA 654+60 LT

CONCRETE ANCHOR FOR GUARD RAIL
STEEL BEAM W/WOOD POSTS, TYPE II (SEE STD G-1)
RAMP B STA 9+50 TO STA 12+95 RT
NEW 6"x 345' UNDERDRAIN WITH
FLUSHING BASIN @ STA 12+95

RP "B" 9+50
55' RT

387'

EQ LI + 75.17

S01°27'04.26"E

STA 6+87.5
END FLARE

EDGE OF SHOULDER

MATCH LINE STA 6+50

RAMP B STA 9+45 TO
STA 7+00 LT
NEW 6"x 245' UNDERDRAIN
W/FLUSHING BASIN @
STA 9+45

EDGE OF RAIL

85-HB-93F

BREAKAWAY CABLE TERMINAL
FOR GUARD RAIL STEEL BEAM
W/WOOD POSTS, TYPE II
(SEE STD. G-14)

MATCH LINE STA 6+00

85-HB-95C

CURVE A-2 DATA
D = 22°55'05.92"
R = 250'
Δ = 82°20'15.42"
L = 359.27'
T = 218.62'

N 722,500

E 351,500

RAMP A STA 2+70 RT TO RTE 117 S.A 30+32 LT
CONSTRUCT SPECIAL DITCH
STONE FILL, TYPE II
6' BOTTOM WIDTH
2:1 SIDE SLOPES

PCC 5+04.96

CURVE A-1 DATA
D = 16°22'12.80"
R = 350'
Δ = 82°39'49.86"
L = 504.96'
T = 307.83'

MATCH LINE

RAMP B

RAMP B STA 7+00 LT TO
RAMP A STA 6+50 LT
NEW 18"x 223' RCP CLASS III

STA 9+50 LT TO
STA 7+00 LT.
NEW 18"x 248' RCP
CLASS III

STA 4+50 LT TO
STA 6+25 RT
NEW 18"x 182' RCP
CLASS III

CURVE # 6 DATA CCCH
D = 1°08'45.30"
R = 5000'
Δ = 8°31'35.74"
L = 744.09'
T = 372.73'
E = 13.87'

STA 667+40 LT TO RAMP A
STA 2+70 RT
NEW 36"x 147' RCP CLASS III

STA 665+90 LT TO
STA 667+40 LT.
NEW 36"x 146' RCP
CLASS III

PT 666+40.62

RAMP A STA 2+70 TO STA 9+90 RT
NEW 6"x 720' UNDERDRAIN WITH
FLUSHING BASIN @ STA 2+70 RT

85-HB-94C

RAMP A

85-HB-93C

MATCH LINE STA 2+00

N 722,500

STA 654+00

MATCH LINE

STA 653+00 RT TO STA 654+50 RT
NEW 30"x 148' RCP CLASS III

STA 654+50 LT TO
STA 654+50 RT
NEW 18"x 76' RCP CLASS III

PT 15+26.05 =
656+97.83

STA 656+50 LT TO
STA 656+50 RT
NEW 18"x 84' RCP
CLASS III

PI CURVE B-2
STA 13+58.18 BACK =
STA 13+43.04 AHEAD

PC 658+96.59 BK =
PC 658+96.53 AHD

STA 9+50
NEW 18"x 55' RCP
CLASS III

STA 9+18.75
BEGIN FLARE

85-HB-100C

85-HB-71C

655 656 657 658 659 660 661 662 663 664 665 666 667

S38°45'23.28"W

VERMONT

ROUTE 289

85-HB-74C

85-HB-75C

85-HB-76C

S30°13'47.54"W

STA 661+55 TO STA 664+50 LT.
NEW 6"x 295' UNDERDRAIN WITH
FLUSHING BASIN @ STA 661+55

STA 659+15 TO
STA 661+50 LT
NEW 6"x 235' UNDERDRAIN WITH
FLUSHING BASIN @ STA 659+15

STA 661+50 LT TO
STA 661+50 RT
NEW 18"x 59' RCP
CLASS III

RAMP B STA 13+00 RT. TO
RAMP D STA 11+00 RT
NEW 18"x 137' RCP CLASS III

STA 664+50 LT. TO
STA 665+90 LT
NEW 18"x 137' RCP
CLASS III

STA 665+40 RT TO
STA 665+90 LT
NEW 36"x 76' RCP CLASS III

STA 664+55 TO STA 667+40 LT
NEW 6"x 285' UNDERDRAIN WITH
FLUSHING BASIN @ STA 664+55

SURVEY PI CURVE #6
STA 662+66.06 BACK =
STA 662+64.69 AHEAD

PI CURVE A-1
STA 3+07.83 BK. =
STA 1+97.13 AHD.

MATCH LINE STA 2+00

MATCH LINE STA 668+00

3' WIDE TOP OF
NOISE ATTENUATION BERM

85-HB-72C

PI CURVE D-1
STA 12+19.46 BK =
STA 11+91.91 AHD

STA 661+55 TO STA 665+40 RT
NEW 6"x 385' UNDERDRAIN
W/FLUSHING BASIN @
STA 661+55

STA 661+50 RT TO STA 665+40 RT
NEW 30"x 386' RCP CLASS III

RAMP C

STA 665+40 RT TO
RAMP C STA 10+00 RT
NEW 18"x 51' RCP
CLASS III

PI CURVE C-3
STA 11+26.01 BK. =
STA 11+24.85 AHD.

PT 12+01.06 =
667+48.50

PCC 10+45.80

CURVE C-3 DATA
D = 11°27'32.96"
R = 500'
Δ = 17°19'58.04"
L = 151.26'
T = 76.21'

(636')

STA 654+60 TO STA 656+50 RT
NEW 6"x 190' UNDERDRAIN
W/FLUSHING BASIN @ STA 654+60 RT

STA 655+92.09 BACK =
STA 656+00.00 AHEAD

PC 9+93.24 =
656+09.39

RAMP D STA11+00 TO
STA 661+50 RT
NEW 30"x 238' RCP CLASS III

020
1A

STA 8+00 LT. TO
STA 8+50 RT
NEW 18"x 72' RCP
CLASS III

REVISED PI CURVE #6
STA 662+69.32 BACK =
STA 662+67.95 AHEAD

PI CURVE C-2
STA 9+26.51 BK. =
STA 9+13.97 AHD.

STA 8+50 RT TO
STA 10+00 RT
NEW 18"x 139' RCP
CLASS III

CURVE C-2 DATA
D = 16°22'12.80"
R = 350'
Δ = 42°25'10.18"
L = 259.13'
T = 135.82'

PCC 7+90.68

020
2A

STA 654+50 TO STA 656+50 RT
NEW 30"x 198' RCP
CLASS III

STA 656+55 TO RAMP D STA 11+00 RT
NEW 6"x 250' UNDERDRAIN WITH
FLUSHING BASIN @ STA 656+55

STA 656+50 TO RAMP D
STA 11+00
NEW 30"x 258' RCP
CLASS III

CURVE D-1 DATA
D = 11°27'32.96"
R = 500'
Δ = 48°41'19.40"
L = 424.89'
T = 226.23'

RP "D" 11+00
105' RT

384'

PT 14+13

S87°26'42.68"W

85-HB-104C

RAMP D

RAMP D
STA 13+20 RT. TO
STA 13+20 LT.
NEW 18"x 52' RCP CLASS III

STA 6+25 LT. TO STA 8+00 LT.
NEW 18"x 195' RCP CLASS III

736'

W 3

W 4

STA 659+85 TO STA 661+50 RT
NEW 6"x 165' UNDERDRAIN WITH
FLUSHING BASIN @ STA 659+85

Woods

RP "D" 15+51
105' RT

RAMP D STA11+35 TO STA13+20 RT
NEW 6"x 185' UNDERDRAIN WITH
FLUSHING BASIN @ STA 11+35

W 1

RAMP D STA14+95 TO STA13+20 RT
NEW 6"x 170' UNDERDRAIN WITH
FLUSHING BASIN @ 14+95

SPRING

020
3A

628'

RAMP D STA15+05 TO STA 17+45 RT
NEW 6"x 240' UNDERDRAIN WITH
FLUSHING BASIN @ STA 15+05

MATCH LINE STA 17+00

STA 6+00

RAMP C STA 6+50 TO STA 10+00 RT
NEW 6"x 350' UNDERDRAIN WITH
FLUSHING BASIN @ STA 6+50

N 723,000

N 724,000

E 352,000

E 351,500

E 351,000

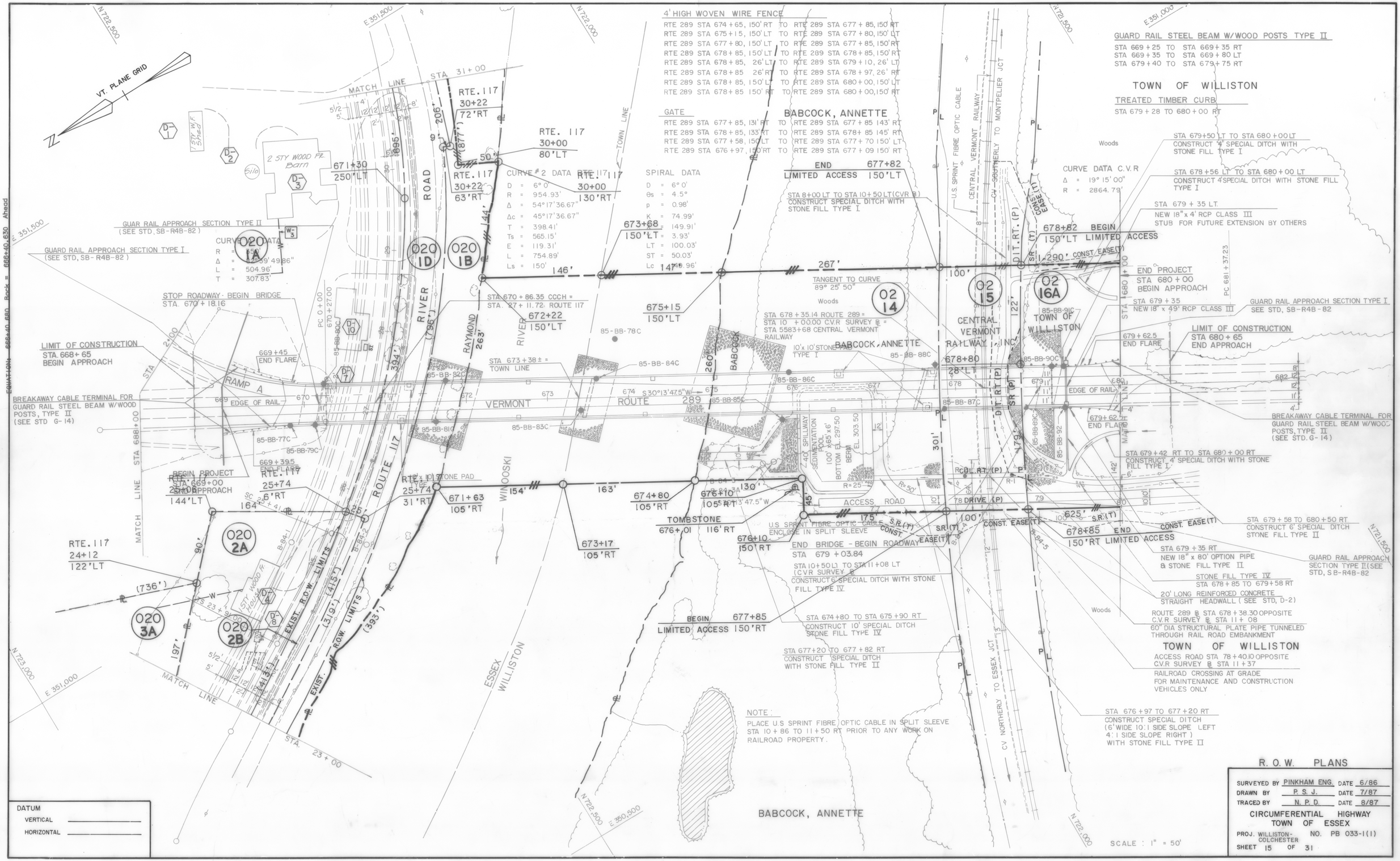
DATUM
VERTICAL _____
HORIZONTAL _____

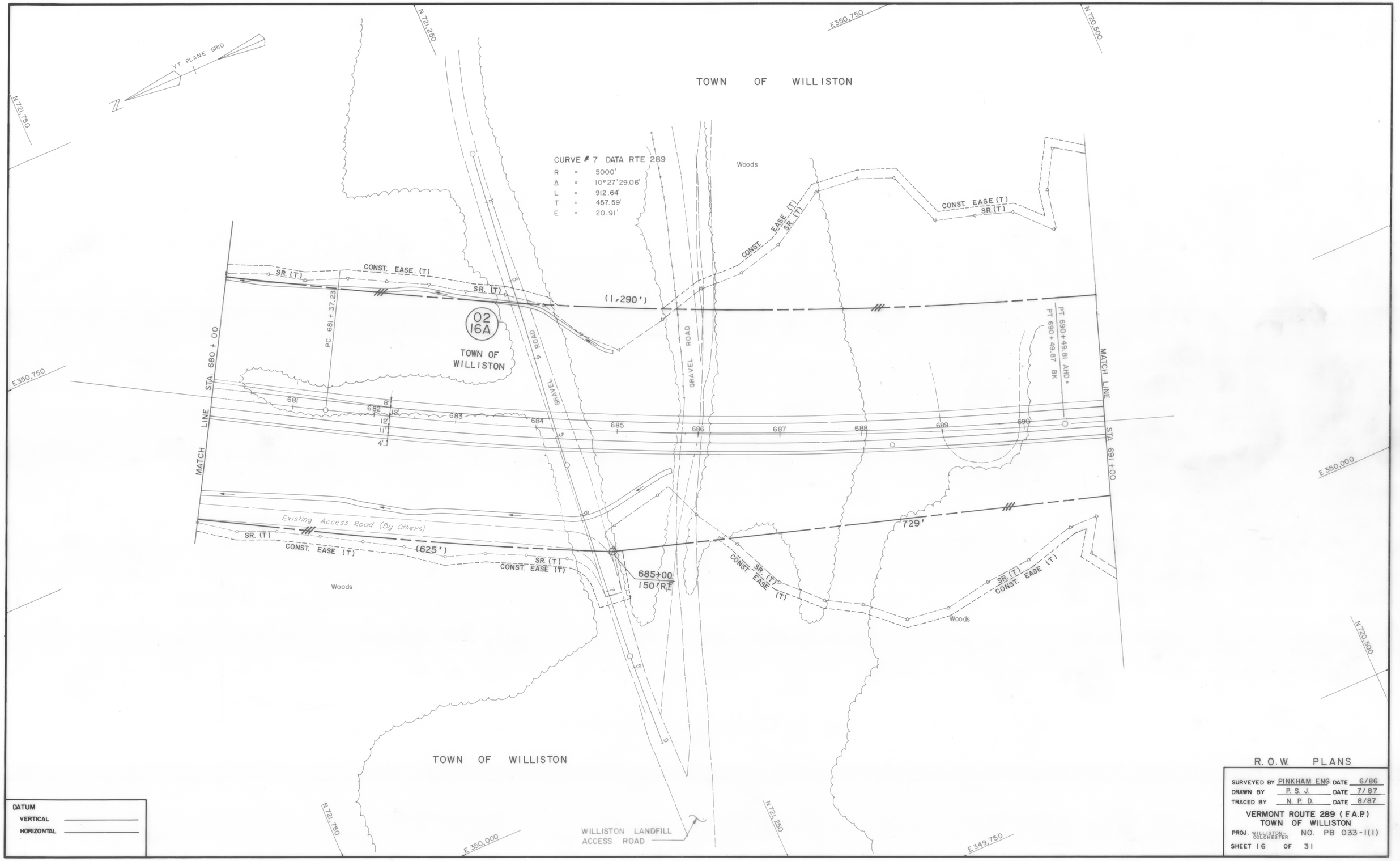
R.O.W. PLANS

SURVEYED BY PINKHAM ENG. DATE 6/86
DRAWN BY P.S.J DATE 7/87
TRACED BY N.P.D DATE 8/87

VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX

PROJ WILLISTON-COLCHESTER NO. PB 033-1(1)
SHEET 14 OF 31


VT. PLANE GRID
N 722,500
E 351,500
N 722,000
E 351,000
MATCH LINE
STA 31+00
RTE. 117
30+22
72'RT
RTE. 117
30+00
80'LT
RTE. 117
30+22
63'RT
RTE. 117
30+00
130'RT
671+30
250'LT
672+22
150'LT
673+68
150'LT
675+15
150'LT
ROUTE 117
TOWN LINE
RIVER (796')
RAYMOND
BABCOCK
VERMONT
ROUTE 289
RAMP A
ROUTE 117
ESSEX
WILLISTON
CENTRAL VERMONT RAILWAY
U.S. SPRINT FIBRE OPTIC CABLE
C.V. SOUTHERLY TO MONTPELIER JCT
C.V. NORTHERLY TO ESSEX JCT
BABCOCK, ANNETTE
TOWN OF WILLISTON
TREATED TIMBER CURB
STA 679+28 TO 680+00 RT
GUARD RAIL STEEL BEAM W/WOOD POSTS TYPE II
STA 669+25 TO STA 669+35 RT
STA 669+35 TO STA 669+80 LT
STA 679+40 TO STA 679+75 RT
4' HIGH WOVEN WIRE FENCE
RTE 289 STA 674+65, 150' RT TO RTE 289 STA 677+85, 150' RT
RTE 289 STA 675+15, 150' LT TO RTE 289 STA 677+80, 150' LT
RTE 289 STA 677+80, 150' LT TO RTE 289 STA 677+85, 150' RT
RTE 289 STA 678+85, 150' LT TO RTE 289 STA 678+85, 150' RT
RTE 289 STA 678+85, 26' LT TO RTE 289 STA 679+10, 26' LT
RTE 289 STA 678+85 26' RT TO RTE 289 STA 678+97, 26' RT
RTE 289 STA 678+85, 150' LT TO RTE 289 STA 680+00, 150' LT
RTE 289 STA 678+85 150' RT TO RTE 289 STA 680+00, 150' RT
GATE
RTE 289 STA 677+85, 131' RT TO RTE 289 STA 677+85 143' RT
RTE 289 STA 678+85, 133' RT TO RTE 289 STA 678+85 145' RT
RTE 289 STA 677+58, 150' LT TO RTE 289 STA 677+70 150' LT
RTE 289 STA 676+97, 150' RT TO RTE 289 STA 677+09 150' RT
END LIMITED ACCESS 677+82 150'LT
STA 8+00 LT TO STA 10+50 LT (CVR B) CONSTRUCT SPECIAL DITCH WITH STONE FILL TYPE I
CURVE #2 DATA
D = 6° 0'
R = 954.93'
Δ = 54°17'36.67"
Δc = 45°17'36.67"
T = 398.41'
Ts = 565.15'
E = 119.31'
L = 754.89'
Ls = 150'
SPIRAL DATA
D = 6° 0'
θs = 4.5°
p = 0.98'
K = 74.99'
= 149.91'
LT = 100.03'
ST = 50.03'
Lc = 147.96'
CURVE DATA C.V.R
Δ = 19° 15' 00"
R = 2864.79'
TANGENT TO CURVE 89° 25' 50"
STA 678+35.14 ROUTE 289 = STA 10+00.00 C.V.R SURVEY B = STA 5583+68 CENTRAL VERMONT RAILWAY
10'x 10' STONE PAD TYPE I
678+82 BEGIN 150'LT LIMITED ACCESS
1,290' CONST. EASE(T)
END PROJECT STA 680+00 BEGIN APPROACH
PC 681+37.23
STA 679+35 NEW 18" x 49' RCP CLASS III
GUARD RAIL APPROACH SECTION TYPE I SEE STD, SB-R48-82
LIMIT OF CONSTRUCTION STA 680+65 END APPROACH
679+62.5 END FLARE
679+62.5T END FLARE
BREAKAWAY CABLE TERMINAL FOR GUARD RAIL STEEL BEAM W/WOOD POSTS, TYPE II (SEE STD. G-14)
STA 679+42 RT TO STA 680+00 RT CONSTRUCT 4' SPECIAL DITCH WITH STONE FILL TYPE I
STA 679+50 LT TO STA 680+00 LT CONSTRUCT 4' SPECIAL DITCH WITH STONE FILL TYPE I
STA 678+56 LT TO STA 680+00 LT CONSTRUCT 4' SPECIAL DITCH WITH STONE FILL TYPE I
STA 679+35 LT NEW 18" x 4' RCP CLASS III STUB FOR FUTURE EXTENSION BY OTHERS
STA 679+58 TO 680+50 RT CONSTRUCT 6' SPECIAL DITCH STONE FILL TYPE II
STA 679+35 RT NEW 18" x 80' OPTION PIPE @ STONE FILL TYPE II
STONE FILL TYPE IV STA 678+85 TO 679+58 RT
20' LONG REINFORCED CONCRETE STRAIGHT HEADWALL (SEE STD, D-2)
ROUTE 289 ℄ STA 678+38.30 OPPOSITE C.V.R SURVEY ℄ STA 11+08
60" DIA STRUCTURAL PLATE PIPE TUNNELED THROUGH RAIL ROAD EMBANKMENT
TOWN OF WILLISTON
ACCESS ROAD STA 78+40.10 OPPOSITE C.V.R SURVEY ℄ STA 11+37
RAILROAD CROSSING AT GRADE FOR MAINTENANCE AND CONSTRUCTION VEHICLES ONLY
STA 676+97 TO 677+20 RT CONSTRUCT SPECIAL DITCH (6' WIDE 10:1 SIDE SLOPE LEFT 4:1 SIDE SLOPE RIGHT) WITH STONE FILL TYPE II
STA 674+80 TO STA 675+90 RT CONSTRUCT 10' SPECIAL DITCH STONE FILL TYPE IV
STA 677+20 TO 677+82 RT CONSTRUCT SPECIAL DITCH WITH STONE FILL TYPE II
BEGIN LIMITED ACCESS 677+85 150'RT
STA 10+50 LT TO STA 11+08 LT (C.V.R SURVEY B) CONSTRUCT 6' SPECIAL DITCH WITH STONE FILL TYPE IV
END BRIDGE - BEGIN ROADWAY STA 679+03.84
676+01 116'RT
676+10 150'RT
673+17 105'RT
674+80 105'RT
676+10 105'RT
675+90 105'RT
671+63 105'RT
RTE. 117 25+74 31'RT
RTE. 117 25+74 6'RT
RTE. 117 24+12 122'LT
RTE. 117 25+06 144'LT
BEGIN PROJECT STA 669+00 STA APPROACH
669+45 END FLARE
669+39.5 END FLARE
LIMIT OF CONSTRUCTION STA. 668+65 BEGIN APPROACH
BREAKAWAY CABLE TERMINAL FOR GUARD RAIL STEEL BEAM W/WOOD POSTS, TYPE II (SEE STD G-14)
GUAR RAIL APPROACH SECTION TYPE II (SEE STD, SB-R48-82)
GUARD RAIL APPROACH SECTION TYPE I (SEE STD, SB-R48-82)
STOP ROADWAY - BEGIN BRIDGE STA. 670+18.16
STA 670+86.35 CCCH = STA 27+11.72 ROUTE 117
STA 673+38± = TOWN LINE
10'x 10' STONE PAD
NOTE: PLACE U.S SPRINT FIBRE OPTIC CABLE IN SPLIT SLEEVE STA 10+86 TO 11+50 RT PRIOR TO ANY WORK ON RAILROAD PROPERTY.
ACCESS ROAD
TOMBSTONE
EXIST. R.O.W. LIMITS
MATCH LINE STA 688+00
MATCH LINE STA 23+00
EQUATION 668+40.880 Back = 666+40.630 Ahead
020 1A
020 1B
020 1D
020 2A
020 2B
020 3A
02 14
02 15
02 16A
D-1
D-2
D-3
D-4
D-7
D-10
W-3
1 STY. W.F. Shed
2 STY WOOD FR. Barn
Silo
1 STY WOOD FR. House
DATUM
VERTICAL
HORIZONTAL
SCALE : 1" = 50'
R. O. W. PLANS
SURVEYED BY PINKHAM ENG. DATE 6/86
DRAWN BY P. S. J. DATE 7/87
TRACED BY N. P. D. DATE 8/87
CIRCUMFERENTIAL HIGHWAY
TOWN OF ESSEX
PROJ. WILLISTON-COLCHESTER NO. PB 033-1(1)
SHEET 15 OF 31

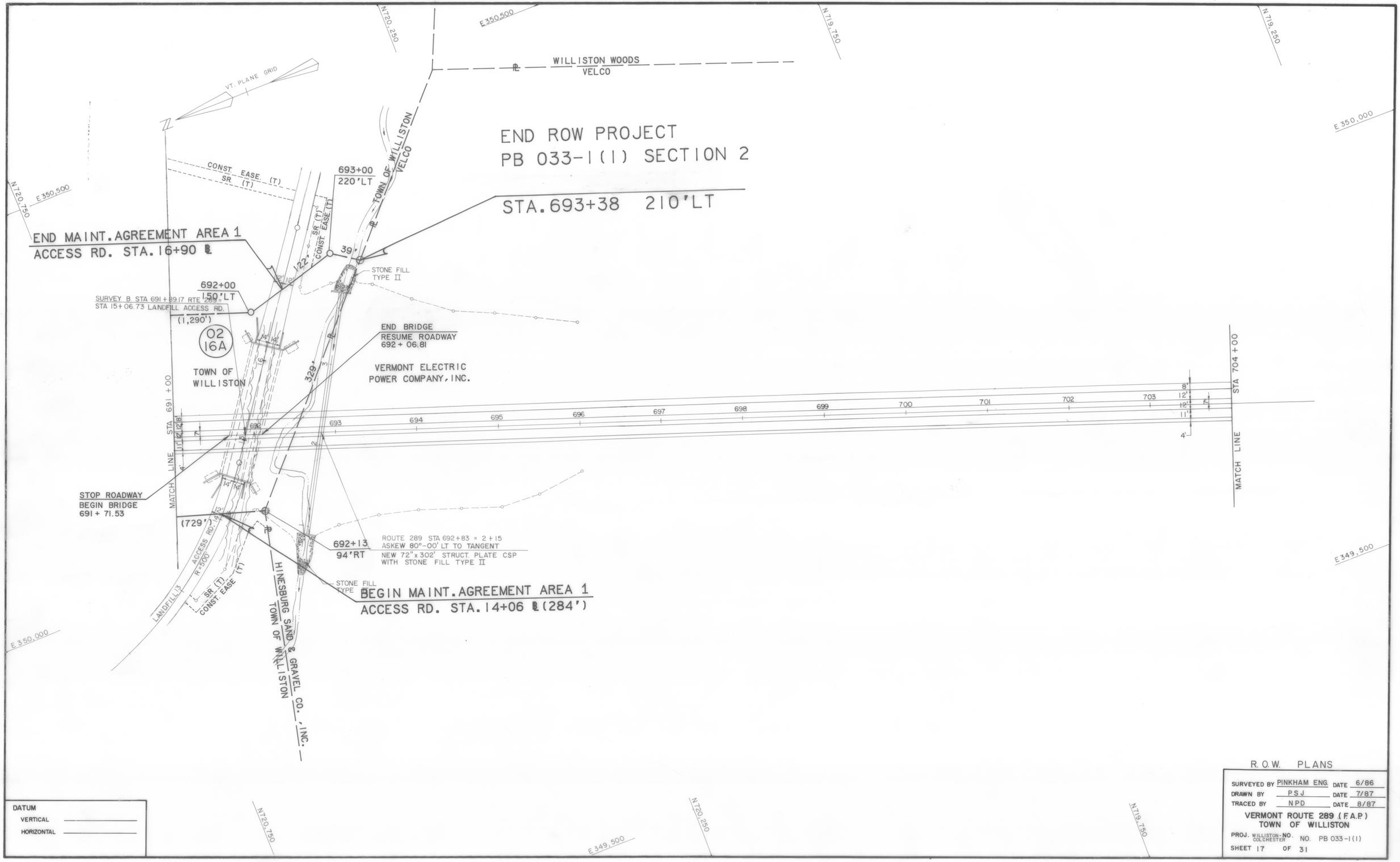


DATUM
VERTICAL _____
HORIZONTAL _____

R. O. W. PLANS

SURVEYED BY PINKHAM ENG. DATE 6/86
DRAWN BY P. S. J. DATE 7/87
TRACED BY N. P. D. DATE 8/87

VERMONT ROUTE 289 (F.A.P.)
TOWN OF WILLISTON
PROJ. WILLISTON-COLCHESTER NO. PB 033-1(1)
SHEET 16 OF 31



DATUM

VERTICAL _____

HORIZONTAL _____

R.O.W. PLANS

SURVEYED BY PINKHAM ENG. DATE 6/86

DRAWN BY P.S.J DATE 7/87

TRACED BY N.P.D DATE 8/87

VERMONT ROUTE 289 (F.A.P.)
TOWN OF WILLISTON

PROJ. WILLISTON-COLCHESTER NO. NO. PB 033-1(1)

SHEET 17 OF 31

REMOVAL AND DISPOSAL OF EXISTING GUARD RAIL
RTE 117 STA 12+00 - RTE 117 STA 23+00 RT

GUARD RAIL STD. STEEL BEAM W/ WOOD POSTS TYPE II
RTE 117 STA 11+25 - RTE 117 STA 19+00 RT.
RTE 117 STA 21+25 - RTE 117 STA 23+00 RT.

SCARIFYING EXISTING PAVEMENT
RTE 117 STA 6+50 - RTE 117 STA 10+00
RTE 117 STA 21+00 - RTE 117 STA 23+00

CONSTRUCT DRIVE
RTE 117 STA 7+80 LT.

EXCAVATION AND REMOVAL OF ROAD SURFACES AND PAVEMENTS
SEED AND MULCH EXISTING RTE 117
RTE 117 STA 20+75 - RTE 117 STA 23+00 RT

4' HIGH WOVEN WIRE FENCE
RAMP D STA 17+00 - RAMP D STA 21+00, 105' RT

RAMP D STA 16+40 TO STA 19+82 LT
NEW 6" x 342' UNDERDRAIN WITH FLUSHING BASIN @ STA 6+40

RAMP D STA 21+44 RT TO STA 22+58 RT
CONSTRUCT SPECIAL STREAM DIVERSION DITCH AND OUTLET PAD
5' BOTTOM WIDTH 2:1 SIDE SLOPES
TYPE II STONE FILL

RAMP D STA 17+45 RT TO RAMP C STA 6+25 LT
NEW 18" x 93' RCP CLASS III

KAUSHAL, KAMLA
25ty W.F. Apt House
W 5 STA 8+14 EXISTING 30" x 57' CULVERT (REMOVE)
WELL
020 7C
NETT # 67 GMP # 34
KAUSHAL & PERKINS
Conc. Slab
SMH
DRIVE (T)
CONST. EASE (T)
020 7B
020 7A
8+77 30'LT
8+77 25'LT
S 87°-01'-23.88"E
(200')
(764')
(273')
9+50 40'RT
9+50 55'RT
CONST. SR(T)
EASE (T)
ADJUST SANITARY MH TO GRADE
STA 9+78 LT TO STA 9+92 RT
NEW 54" x 112' RCP CLASS III
STA. 7+45 to 8+19 Lt.
NEW 18" x 80' CSP (.064")
STA 9+50 LT TO STA 9+71 LT
NEW 18" x 36' CSP WITH 2-18" CSP ELBOWS
8+77 70'LT
590'
576'
375'
249'
97'
140'
117'
703'
765'
151'
628'
64'
50'
28'
ADJUST SANITARY MH TO GRADE
020 3B
020 3E
020 3C
020 3F
020 3D
020 3A
020 2A
020 2B
020 1A
020 1B
020 1C
020 1D
020 5
020 6
020 7A
020 7B
020 8A
020 8B
020 3C
RIVER ROAD
WINOOSKI RIVER
ROUTE 117
PERKINS
MATCH LINE STA 7+00
MATCH LINE STA 17+00
MATCH LINE STA 6+00
BREAKAWAY CABLE TERMINAL FOR GUARD RAIL STEEL BEAM W/WOOD POSTS, TYPE II (SEE STD. G-14)
85-HB-108C
85-HB-109C
85-HB-110F
85-HB-107C
85-HB-106C
85-HB-105C
85-HB-101C
85-SB-117
85-SB-118
NETT # 3/68 GMP # 33
NETT # 3/69 GMP # 32
NETT # 3/70 GMP # 31
NETT # 3/71 GMP # 30
NETT # 3/61 GMP # 34
NETT # 66 GMP # 35
Survey
Guy Pole
Trees & Brush
Gravel Drive
Gravel Parking
Garage
House
Brook
Fence
Dead Elm
30" Pine
24" Maple
15ty W.F. Store
FUTURE SIDEWALK
EDGE OF SHOULDER
EDGE OF RAIL
EXISTING R.O.W. LIMIT
CONSTRUCT SPECIAL STREAM DIVERSION DITCH AND OUTLET PAD 5' BOTTOM WIDTH 2:1 SIDE SLOPES TYPE II STONE FILL
RAMP D STA 20+00 RT TO STA 21+50 RT
NEW 6" x 150' UNDERDRAIN WITH FLUSHING BASIN @ STA 20+00 RT AND CRM HEADWALL @ STA 21+50 RT
RAMP D STA 22+28 RT TO STA 22+28 RT
NEW 18" x 30' CSP WITH METAL END SECTION
RAMP D STA 22+58 RT TO STA 18+75 RT
NEW 48" x 126' RCP CLASS III
STA 18+75 RT
CONSTRUCT NEW DITCH 6' BOTTOM WIDTH 1.5:1 SIDE SLOPES TYPE II STONE FILL
STA 18+87.5 BEGIN FLARE
STA 18+83 RT TO STA 19+00 LT
NEW 18" x 61' RCP CLASS III
STA 19+00 LT TO STA 19+45 LT
NEW 18" x 43' RCP CLASS III
STA 19+40 LT TO STA 19+72 LT
EXISTING 12" x 32' CGMP (REMOVE)
STA 19+45 LT TO STA 20+33 LT
NEW 18" x 88' RCP CLASS III
STA 19+82 RT TO STA 19+82 RT
NEW 18" x 41' RCP CLASS III WITH RCP END SECTION
RAMP D STA 22+58 RT TO STA 18+75 RT
NEW 48" x 126' RCP CLASS III
RAMP C STA 0+00 TO STA 6+40
NEW 6" x 640' UNDERDRAIN W/ FLUSHING BASIN @ STA 6+40
RAMP D STA 21+62
EXISTING 18" x 48' CGMP (REMOVE)
RAMP C STA 0+50 RT TO STA 22+00 LT
NEW 18" x 54' RCP CLASS III
STA 22+00 LT TO STA 22+00 LT
NEW 18" x 34' RCP CLASS III
STA 20+07 LT TO STA 20+33 LT
NEW 18" x 49' RCP CLASS III
STA 20+33 LT TO STA 21+00 LT
NEW 18" x 65' RCP CLASS III
ADJUST SANITARY MH TO GRADE
STA 22+61 79'RT
STA 22+61 64'RT
STA 22+61 39'RT
STA 21+61 19'RT
STA 21+61 44'RT
20+80 106'LT
22+20 69'LT
18+00 70'LT
14+50 6'LT
14+50 44'RT
12+00 55'RT
13+00 70'LT
5+50 25'LT
5+77 25'LT
6+77 30'LT
6+77 25'LT
5+50 25'RT
5+50 40'RT
6+77 25'RT
6+77 40'RT
RP "D" 21+00 105'RT
PI CURVE 1A STA 15+01.37 BACK = STA 14+85.43 AHEAD
PI CURVE D-2 STA 19+10.34 BACK = STA 19+00.25 AHEAD
PI CURVE D-3 STA 22+36.05 BACK = STA 21+88.76 AHEAD
PI CURVE 1B STA 19+87.09 BACK = STA 19+80.95 AHEAD
PC 21+04.29
PT 23+20.52
PC 0+00 = 21+82.34
PC 17+94.95
PT 20+15.80
ST 22+88.99
ST 23+00
BEGIN LIMITED ACCESS RTE 117 14+50 72' RT.
END LIMITED ACCESS RTE 117 14+50 70' LT
TOWN OF ESSEX
TRUAX, STEPHEN P.
THOMAS, FAWN
MATTHEWS, VIVIAN I.
KAUSHAL, KAMLA
MOREAU, STEPHEN J. & DAYLE A.
JENKS, WILLIAM A. & BRENDA R.
TO ESSEX VILLAGE
Sanitary Force Main
Sewer Main
SMH
S 87°-59'-13.58"E
RAYMOND & RAYMOND
N 723,500
N 723,000
N 722,750
E 349,750
E 350,000
E 350,250
E 350,500
E 350,750
E 351,000
N 146°07'23.90"E
S 87°-01'-23.88"E
S 87°-59'-13.58"E

CURVE D-3 DATA
D = 38°11'49.87"
R = 150'
Δ = 82°35'32.60"
L = 216.23'
T = 131.76'

CURVE D-2 DATA
D = 18°43'26.80"
R = 306'
Δ = 41°19'18.78"
L = 220.69'
T = 115.39'

CURVE C-1 DATA
D = 22°55'05.92"
R = 250'
Δ = 181°12'33.35"
L = 790.68'

SPIRAL DATA CURVE 1A RTE 117
D = 6°00'
θs = 4.5°
p = 0.98'
K = 74.99'
X = 149.91'
Y = 3.93'
LT = 100.03'
ST = 50.03'
Lc = 149.96'

CURVE 1A DATA RTE 117
D = 6°00'
R = 954.93'
Δ = 32°57'18.46"
Δc = 28°27'18.46"
T = 242.12'
Ts = 355.93'
Es = 41.41'
L = 474.25'
Ls = 150'

SPIRAL DATA CURVE 1B RTE 117
D = 5°30'
θs = 4.125°
p = 0.90'
K = 74.99'
X = 149.92'
Y = 3.60'
LT = 100.03'
ST = 50.03'
Lc = 149.97'

CURVE 1B DATA RTE 117
D = 5°30'
R = 1041.74'
Δ = 23°20'11.38"
Δc = 19°12'41.38"
T = 176.30'
Ts = 288.03'
Es = 22.44'
L = 349.30'
Ls = 150'

NOTE:
ALL STATIONS AND OFFSETS ON THIS SHEET ARE REFERENCED TO THE ROUTE 117 BASELINE UNLESS OTHERWISE NOTED.

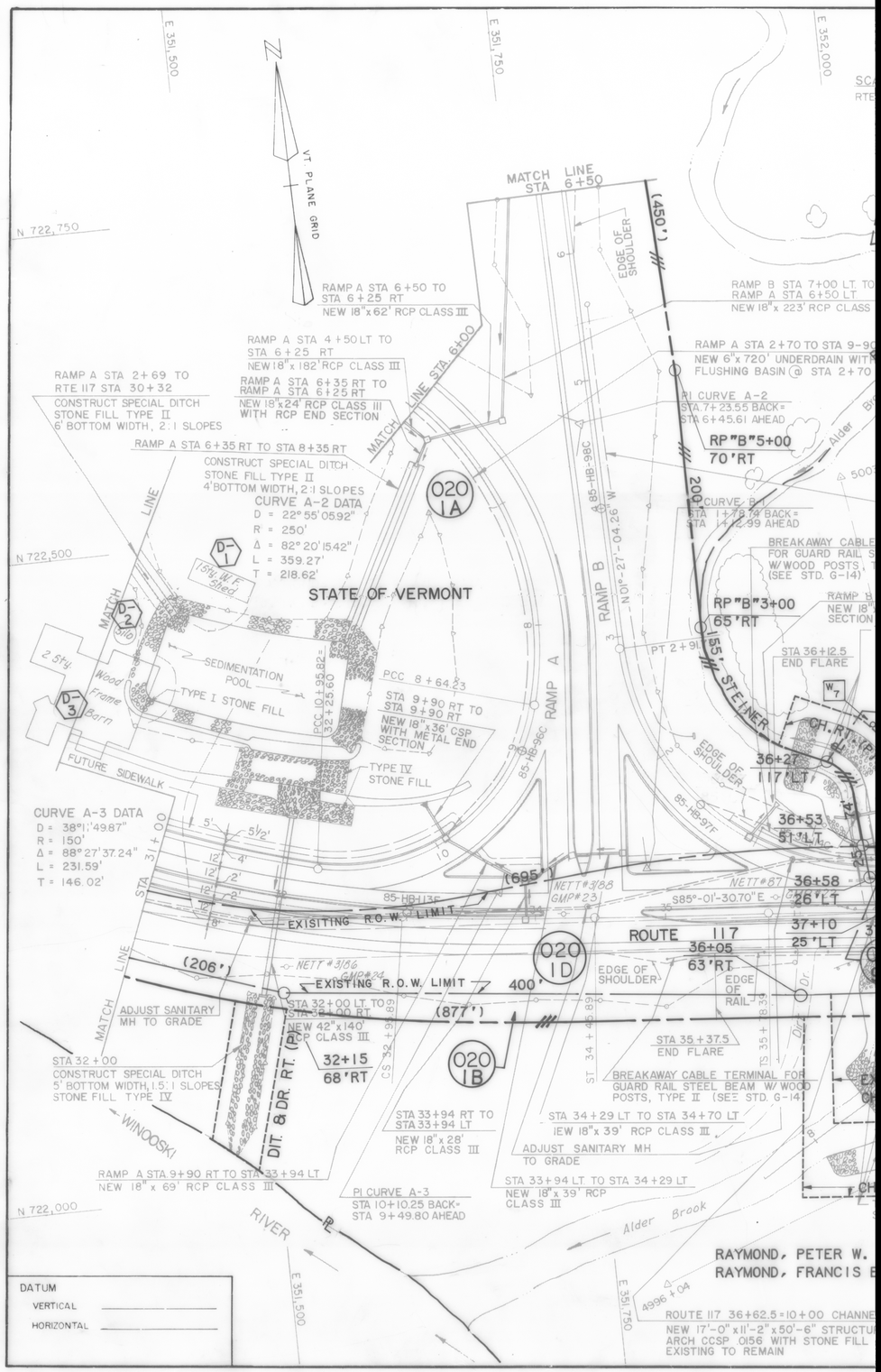
NOTE:
FOR CURB TIES AT RAMP ISLANDS AND ROUTE 117 ISLANDS SEE GRADING PLANS.

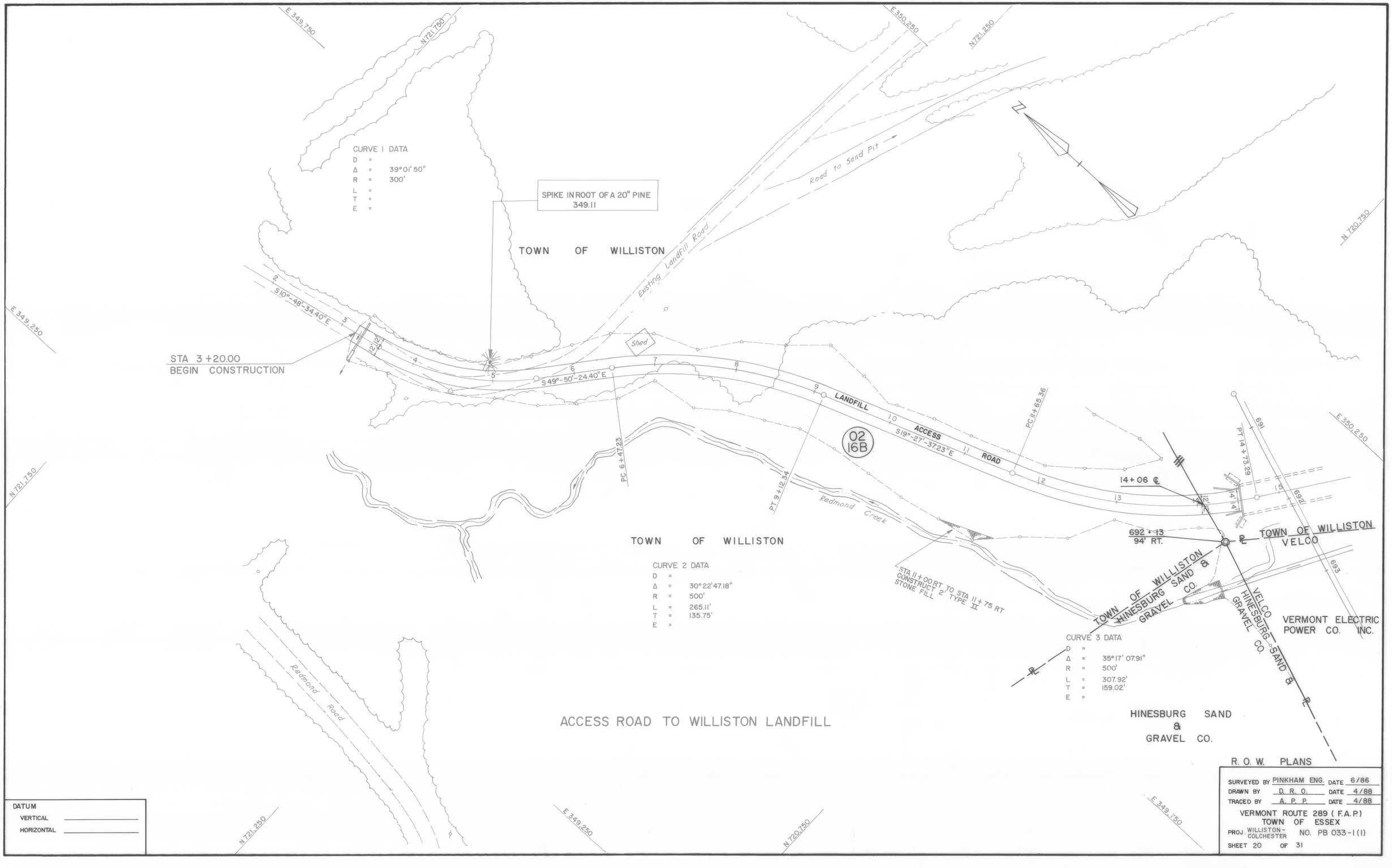
DATUM
VERTICAL _____
HORIZONTAL _____

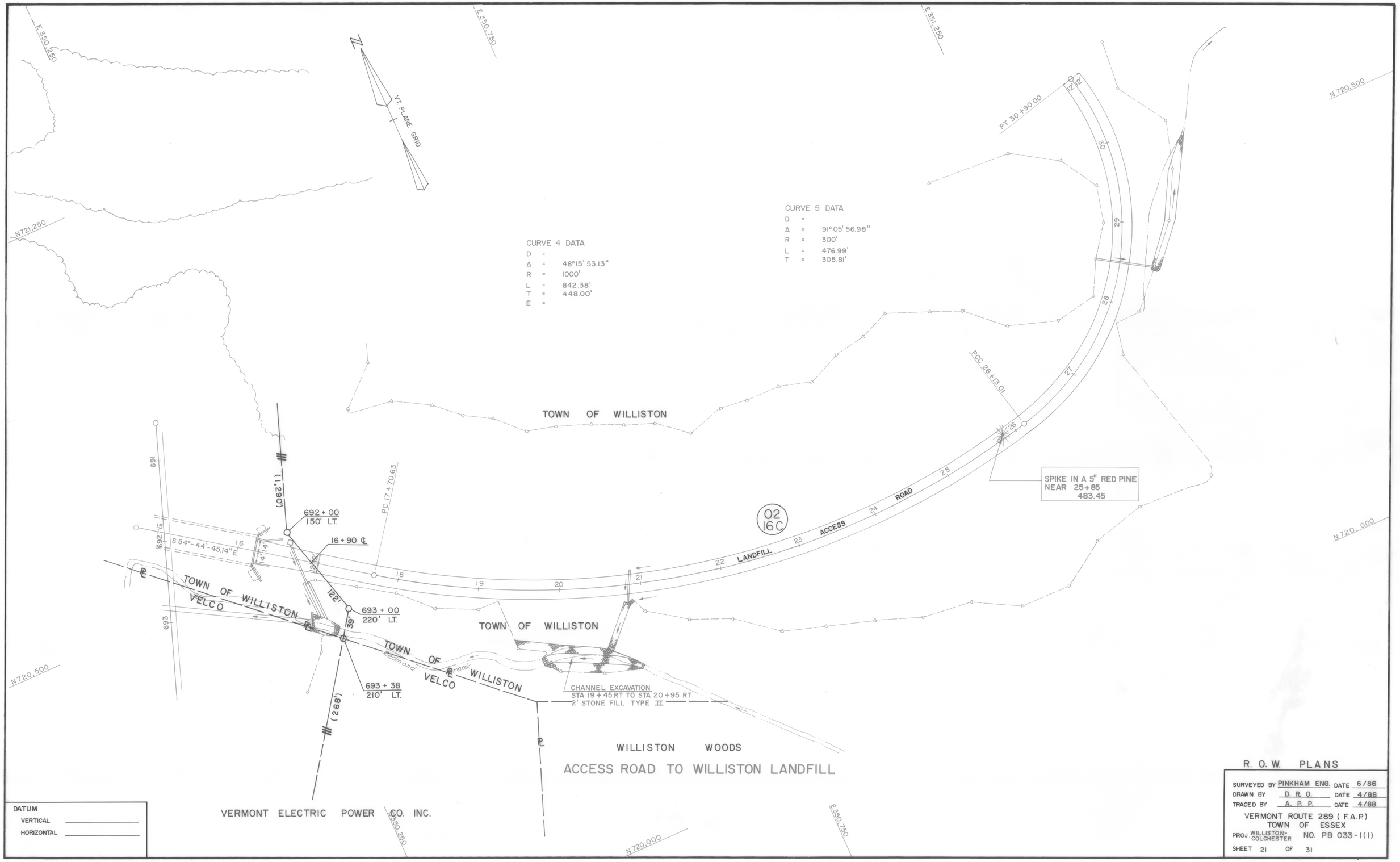
R.O.W. PLANS

SURVEYED BY PINKHAM ENG. DATE 6/86
DRAWN BY P.S.J. DATE 7/87
TRACED BY N.P.D DATE 8/87

VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX
PROJ. WILLISTON-COLCHESTER NO. PB 033-1(1)
SHEET 18 OF 31


E 351,500
E 351,750
E 352,000
N 722,750
N 722,500
N 722,000
VT. PLANE GRID
MATCH LINE STA 6+50
EDGE OF SHOULDER
(450')
RAMP A STA 6+50 TO STA 6+25 RT
NEW 18"x62' RCP CLASS III
RAMP A STA 4+50 LT TO STA 6+25 RT
NEW 18"x182' RCP CLASS III
RAMP A STA 6+35 RT TO RAMP A STA 6+25 RT
NEW 18"x24' RCP CLASS III WITH RCP END SECTION
RAMP A STA 2+69 TO RTE 117 STA 30+32
CONSTRUCT SPECIAL DITCH
STONE FILL TYPE II
6' BOTTOM WIDTH, 2:1 SLOPES
RAMP A STA 6+35 RT TO STA 8+35 RT
CONSTRUCT SPECIAL DITCH
STONE FILL TYPE II
4' BOTTOM WIDTH, 2:1 SLOPES
CURVE A-2 DATA
D = 22°55'05.92"
R = 250'
Δ = 82°20'15.42"
L = 359.27'
T = 218.62'
MATCH LINE STA 6+00
020 1A
D-1
15%, W.F. Shed
STATE OF VERMONT
D-2
Shed
2 Sty.
Wood Frame Barn
D-3
SEDIMENTATION POOL
TYPE I STONE FILL
PCC 10+95.82 = 32+25.60
PCC 8+64.23
STA 9+90 RT TO STA 9+90 RT
NEW 18"x36' CSP WITH METAL END SECTION
TYPE IV STONE FILL
FUTURE SIDEWALK
RAMP A
RAMP B
85-HB-98C
N01°-27'-04.26" W
CURVE A-3 DATA
D = 38°11'49.87"
R = 150'
Δ = 88°27'37.24"
L = 231.59'
T = 146.02'
STA 3+00
5'
5½'
12'
4'
2'
18'
10'
(695')
NETT #3/88
GMP #23
85-HB-113F
EXISTING R.O.W. LIMIT
S85°-01'-30.70" E
ROUTE 117
020 1D
020 1B
(206')
NETT #3/86
GMP #24
EXISTING R.O.W. LIMIT
400'
(877')
ADJUST SANITARY MH TO GRADE
STA 32+00 LT TO STA 32+00 RT
NEW 42"x140' RCP CLASS III
32+15
68'RT
STA 32+00
CONSTRUCT SPECIAL DITCH
5' BOTTOM WIDTH, 1.5:1 SLOPES
STONE FILL TYPE IV
DIT. & DR. RT. (P)
CS 32+68
CS 34+68.80
TS 35+82.34
EDGE OF SHOULDER
EDGE OF RAIL
STA 35+37.5
END FLARE
BREAKAWAY CABLE TERMINAL FOR GUARD RAIL STEEL BEAM W/ WOOD POSTS, TYPE II (SEE STD. G-14)
STA 33+94 RT TO STA 33+94 LT
NEW 18"x 28' RCP CLASS III
STA 34+29 LT TO STA 34+70 LT
NEW 18"x 39' RCP CLASS III
ADJUST SANITARY MH TO GRADE
STA 33+94 LT TO STA 34+29 LT
NEW 18"x 39' RCP CLASS III
RAMP A STA 9+90 RT TO STA 33+94 LT
NEW 18" x 69' RCP CLASS III
PI CURVE A-3
STA 10+10.25 BACK=
STA 9+49.80 AHEAD
← WINOOSKI
RIVER
Alder Brook
RAMP B STA 7+00 LT TO
RAMP A STA 6+50 LT
NEW 18"x 223' RCP CLASS
RAMP A STA 2+70 TO STA 9-90
NEW 6"x 720' UNDERDRAIN WITH
FLUSHING BASIN @ STA 2+70
PI CURVE A-2
STA 7+23.55 BACK=
STA 6+45.61 AHEAD
RP "B" 5+00
70'RT
200'
PI CURVE B-1
STA 1+78.78 BACK=
STA 1+12.99 AHEAD
RP "B" 3+00
65'RT
155'
STEINER
PT 2+91
STA 36+12.5
END FLARE
CH. RT. (P)
36+27
117'LT
36+53
51'LT
36+58
26'LT
37+10
25'LT
36+05
63'RT
NETT #87
Alder Brook
RAYMOND, PETER W.
RAYMOND, FRANCIS E
ROUTE 117 36+62.5=10+00 CHANNE
NEW 17'-0"x11'-2"x50'-6" STRUCTU
ARCH CCSP 0156 WITH STONE FILL
EXISTING TO REMAIN
4996+04
DATUM
VERTICAL
HORIZONTAL


E 349.750
N 721.750
E 350.250
N 721.250
N 720.750
E 349.250
N 721.750
E 349.250
N 721.250
E 349.750
N 720.750
E 350.250
CURVE 1 DATA
D =
Δ = 39°01' 50"
R = 300'
L =
T =
E =
SPIKE IN ROOT OF A 20" PINE
349.11
TOWN OF WILLISTON
Existing Landfill Road
Road to Sand Pit
N
S 10°-48'-34.40" E
STA 3 +20.00
BEGIN CONSTRUCTION
Shed
S 49°-50'-24.40" E
LANDFILL ACCESS ROAD
S 19°-27'-37.23" E
PC 11+65.36
02
16B
PC 9+47.23
PT 9+12.34
Redmond Creek
14+06 ℄
PT 14+73.29
692 + 13
94' RT.
TOWN OF WILLISTON
VELCO
TOWN OF WILLISTON
HINESBURG SAND & GRAVEL CO.
VELCO
HINESBURG SAND & GRAVEL CO.
VERMONT ELECTRIC POWER CO. INC.
STA 11+00 RT TO STA 11+75 RT
CONSTRUCT 2 TYPE II
STONE FILL
TOWN OF WILLISTON
CURVE 2 DATA
D =
Δ = 30° 22' 47.18"
R = 500'
L = 265.11'
T = 135.75'
E =
CURVE 3 DATA
D =
Δ = 35° 17' 07.91"
R = 500'
L = 307.92'
T = 159.02'
E =
HINESBURG SAND & GRAVEL CO.
Redmond Road
ACCESS ROAD TO WILLISTON LANDFILL
DATUM
VERTICAL
HORIZONTAL
R. O. W. PLANS
SURVEYED BY PINKHAM ENG. DATE 6/86
DRAWN BY D. R. O. DATE 4/88
TRACED BY A. P. P. DATE 4/88
VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX
PROJ. WILLISTON - COLCHESTER NO. PB 033-1 (1)
SHEET 20 OF 31



E 350,250
E 350,750
E 351,250
N 720,500
N 721,250
N 720,000
N 720,500
N 720,000
E 350,250
E 350,750
VT. PLANE GRID
CURVE 4 DATA
D =
Δ = 48°15' 53.13"
R = 1000'
L = 842.38'
T = 448.00'
E =
CURVE 5 DATA
D =
Δ = 91°05' 56.98"
R = 300'
L = 476.99'
T = 305.81'
PT 30+90.00
PCC 26+13.01
PC 17+70.63
TOWN OF WILLISTON
SPIKE IN A 5" RED PINE
NEAR 25+85
483.45
02
16C
LANDFILL ACCESS ROAD
692+00
150' LT.
16+90 ℄
S 54°-44'-45.14" E
(1,290')
(268')
693+00
220' LT.
693+38
210' LT.
TOWN OF WILLISTON
VELCO
TOWN OF WILLISTON
VELCO
Redmond Creek
CHANNEL EXCAVATION
STA 19+45 RT TO STA 20+95 RT
2' STONE FILL TYPE II
WILLISTON WOODS
ACCESS ROAD TO WILLISTON LANDFILL
VERMONT ELECTRIC POWER CO. INC.
DATUM
VERTICAL
HORIZONTAL
R. O. W. PLANS
SURVEYED BY PINKHAM ENG. DATE 6/86
DRAWN BY D. R. O. DATE 4/88
TRACED BY A. P. P. DATE 4/88
VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX
PROJ. WILLISTON-COLCHESTER NO. PB 033-1(1)
SHEET 21 OF 31

SHEET 21 OF 22 SHEETS

PROJ. MILLISTON-COLCHESTER NO. PB 032-1(1)

VERMONT ROUTE 289 (E.A.P.)

TOWN OF ESSEX

SURVEYED BY PINKHAM ENG. DATE 1988

DRAWN BY S.K.O., R.C.A. DATE 10\88

TRACED BY M.P.D. DATE 11\88

SCALE IN FEET 0 25 50 0 2 10

K = 110
VC = 800'

STA 252+00 AHEAD = STA 252+50.26 BACK

EL. 318.20 AT STA 250+00

EL. 300.20 AT STA 253+00

EL. 323.24 AT STA 251+50

EL. 313.24 AT STA 250+35.74

EL. 305.23 AT STA 249+50

EL. 303.23 AT STA 249+00

EL. 298.23 AT STA 248+50

EL. 293.23 AT STA 248+00

EL. 288.23 AT STA 247+50

EL. 283.23 AT STA 247+00

EL. 278.23 AT STA 246+50

EL. 273.23 AT STA 246+00

EL. 268.23 AT STA 245+50

EL. 263.23 AT STA 245+00

EL. 258.23 AT STA 244+50

EL. 253.23 AT STA 244+00

EL. 248.23 AT STA 243+50

EL. 243.23 AT STA 243+00

EL. 238.23 AT STA 242+50

EL. 233.24 AT STA 242+00

18" RCP CLASS III

CLASS III 18" RCP

CLASS III 36" RCP

CLASS III 18" RCP

18" RCP CLASS III

18" RCP

LIFT TO CUT TRANSITION
STA 249+00 ⌣ 249+40

CUT TO LIFT TRANSITION
STA 252+10 ⌣ 252+82

LIFT TO CUT TRANSITION
STA 242+40 ⌣ 242+90

BEGIN BRIDGE
STOP ROADWAY
240+19.00

END BRIDGE
RESUME ROADWAY
240+20.00

BROOK @ = 90° SKEW
VIDER BROOK 00.00+01.00

18" WATER PIPE (CMD)
EL. 268.3

K = 171
VC = 600'

STRUCTURE INSTALLATION DATA

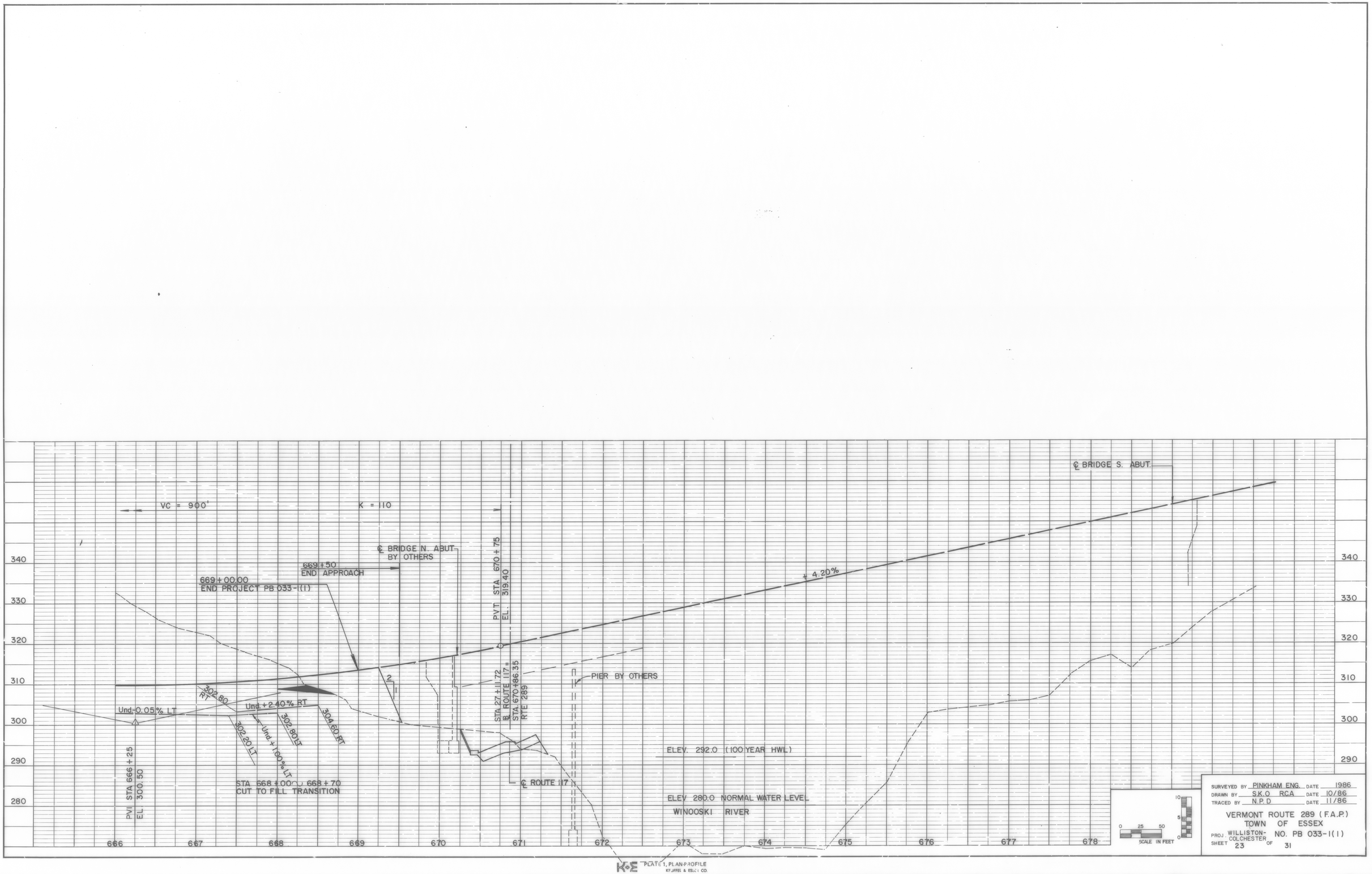
8'-0" x 4'-0" BOX CULVERT

DESIGNED DRAWN CHECKED QUANTITIES APPROVED

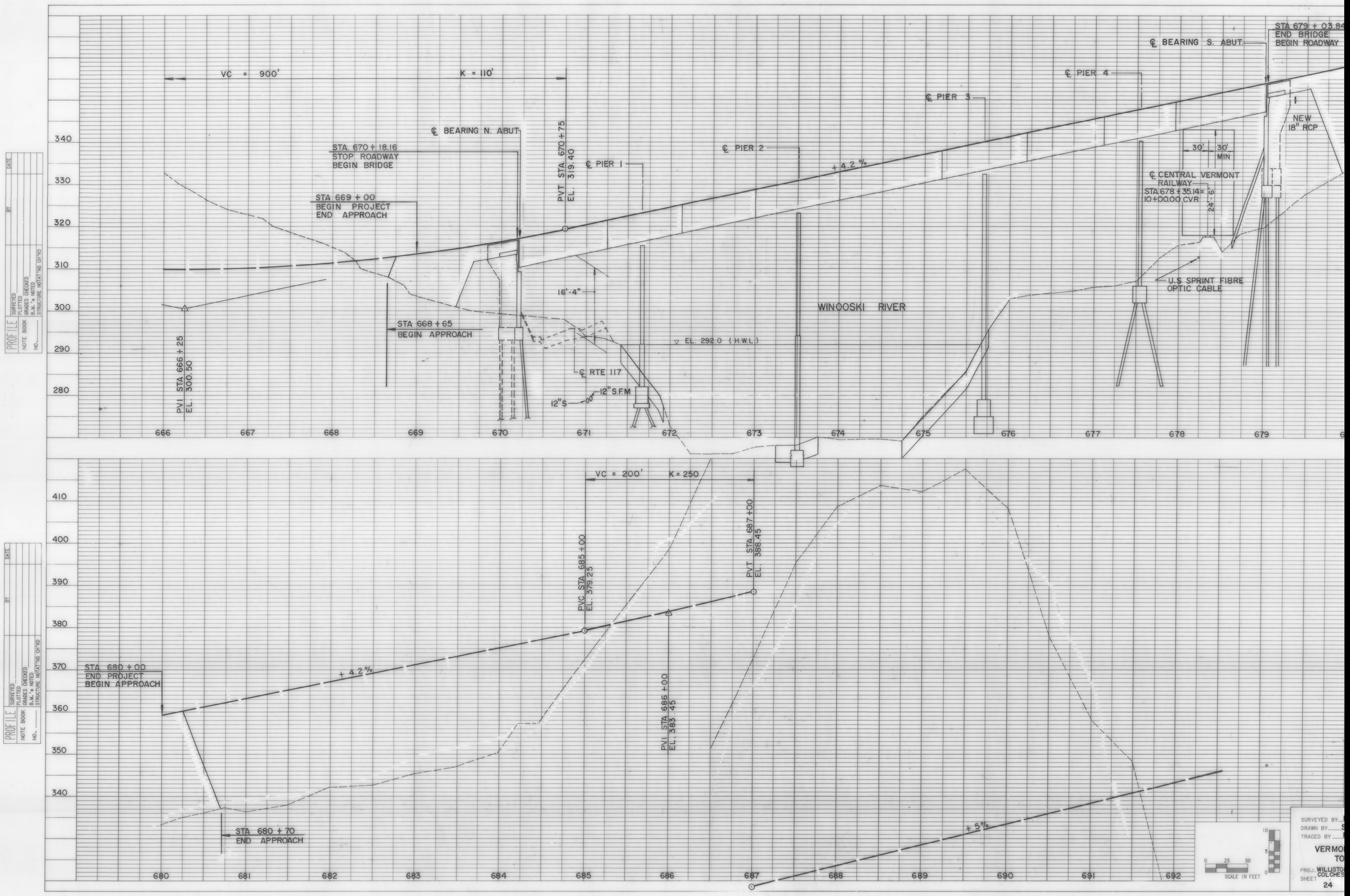
NO. BY DATE

REVISIONS

BRIDGE BOOK



PLAN
NOTE BOOK
No.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE
PROFILE
NOTE BOOK
No.
SURVEYED
PLOTTED
GRADES CHECKED
B.M.'s NOTED
STRUCTURE NOTATIONS CHECKED
BY
DATE
VC = 900'
K = 110
℄ BRIDGE S. ABUT.
℄ BRIDGE N. ABUT. BY OTHERS
669+50 END APPROACH
669+00.00 END PROJECT PB 033-1(1)
PVT STA 670+75 EL. 319.40
+4.20%
PIER BY OTHERS
STA 27+11.72 ℄ ROUTE 117 = STA 670+86.35 RTE 289
302.80 RT
Und.-0.05% LT
Und.+2.40% RT
302.20 LT
Und.+1.00% LT
302.80 LT
304.60 RT
PVI STA 666+25 EL. 300.50
STA 668+00 ∽ 668+70 CUT TO FILL TRANSITION
℄ ROUTE 117
ELEV. 292.0 (100 YEAR HWL)
ELEV 280.0 NORMAL WATER LEVEL
WINOOSKI RIVER
340
330
320
310
300
290
280
666
667
668
669
670
671
672
673
674
675
676
677
678
0 25 50
SCALE IN FEET
10
5
0
SURVEYED BY PINKHAM ENG. DATE 1986
DRAWN BY S.K.O RCA DATE 10/86
TRACED BY N.P.D DATE 11/86
VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX
PROJ. WILLISTON-COLCHESTER NO. PB 033-1(1)
SHEET 23 OF 31
K+E PLATE 1, PLAN-PROFILE
KEUFFEL & ESSER CO.



PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
B.M.'s NOTED
STRUCTURE NOTAT'NS CH'KD
BY
DATE

PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
B.M.'s NOTED
STRUCTURE NOTAT'NS CH'KD
BY
DATE

SURVEYED BY
DRAWN BY
TRACED BY
VERMO
TO
PROJ. WILLISTO
COLCHES
SHEET
24

PROFILE
SURVEYED
PLOTTED
NOTE BOOK
GRADES CHECKED
R.M.'s NOTED
NO.
STRUCTURE NOTATIONS CHKD
BY
DATE

410
400
390
380
370
360
350

680 681 682 683 684 685 686 687 688

VC = 200' K = 250

PVC STA 685 + 00
EL. 379.25

PVI STA 686 + 00
EL. 383.45

PVT STA 687 + 00
EL. 388.45

+ 4.20 %

698 699 700 701 702 703

+ 5.00 %

PROFILE
SURVEYED
PLOTTED
NOTE BOOK
GRADES CHECKED
R.M.'s NOTED
NO.
STRUCTURE NOTATIONS CHKD
BY
DATE

450
440
430
420
410
400
390
380
370
360

STA 691 + 89.17 ROUTE 289±
STA 15+06.73 REDMOND RD. RELOCATED

+ 5.00 %

SURCHARGE EMBANKMENT

NEW 72" STRUCT. PLATE CMP

692 693 694 695 696 697 698 699 700

200' K = 250

PVT STA 687 + 00
EL. 388.45

PVI STA 686 + 00
EL. 383.45

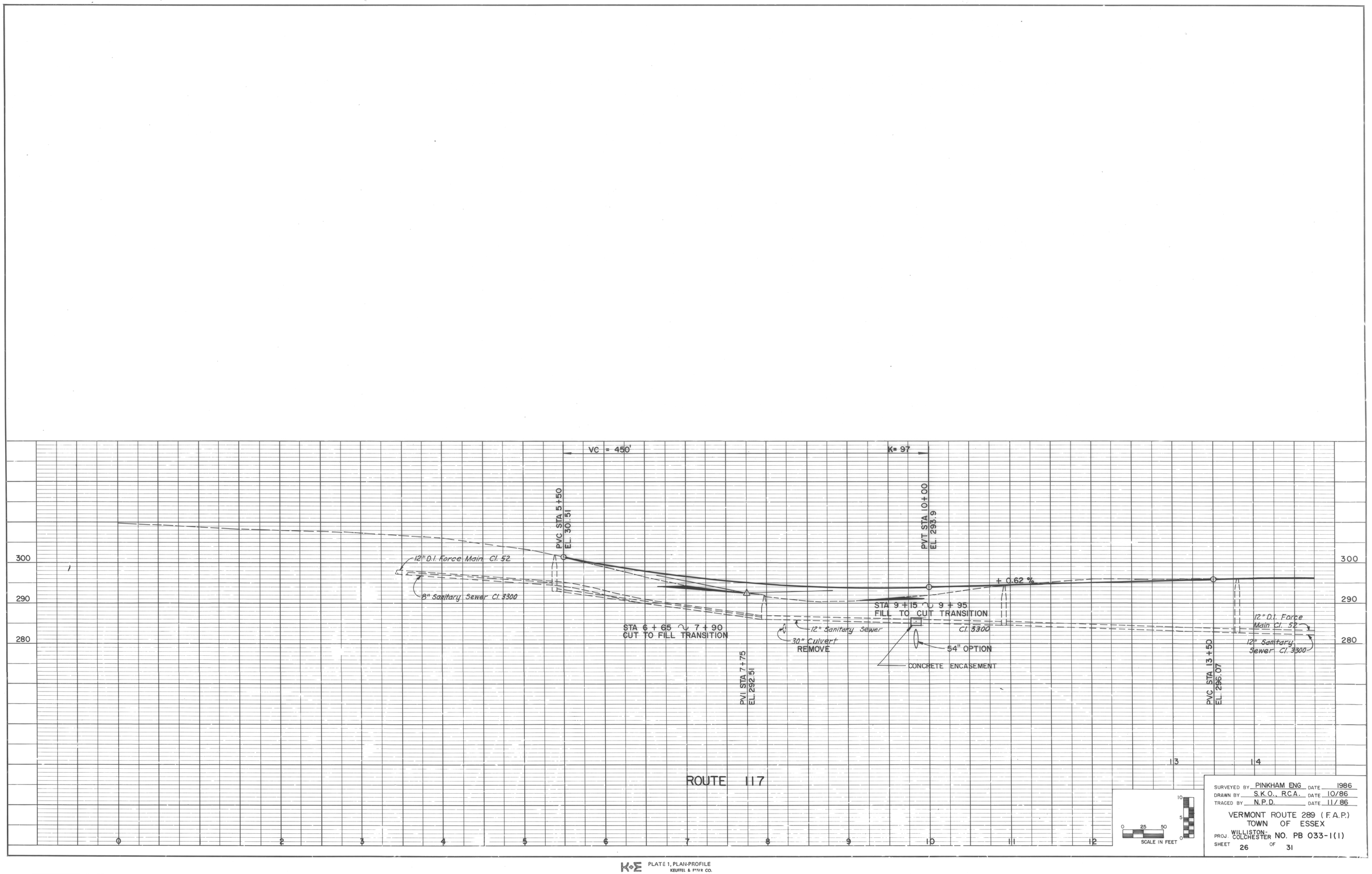
+ 5.00 %

+ 5.00 %

686 687 688 689 690 691

PLAN
SURVEYED
PLOTTED
NOTE BOOK
ALIGNMENT CHECKED
ST. OF MAT CHECKED
No.
BY
DATE

PROFILE
SURVEYED
PLOTTED
NOTE BOOK
GRADES CHECKED
S. M.'s NOTED
STRUCTURE EXCAVATIONS CHECKED
No.
BY
DATE

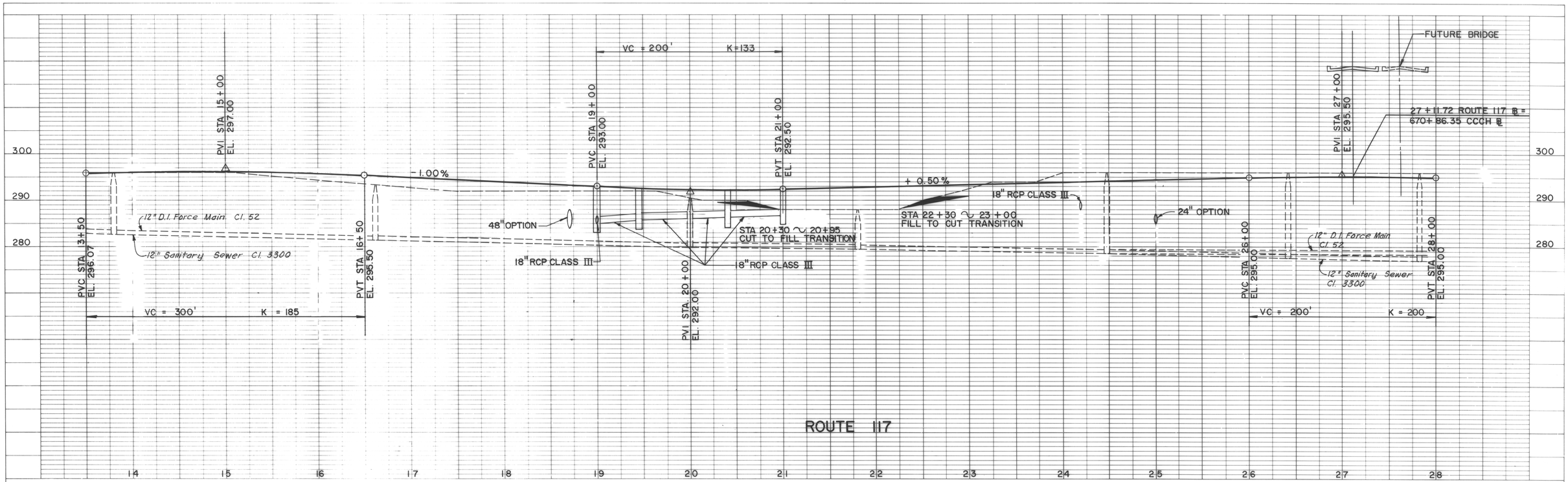


SURVEYED BY PINKHAM ENG DATE 1986
DRAWN BY S.K.O., R.C.A. DATE 10/86
TRACED BY N.P.D. DATE 11/86

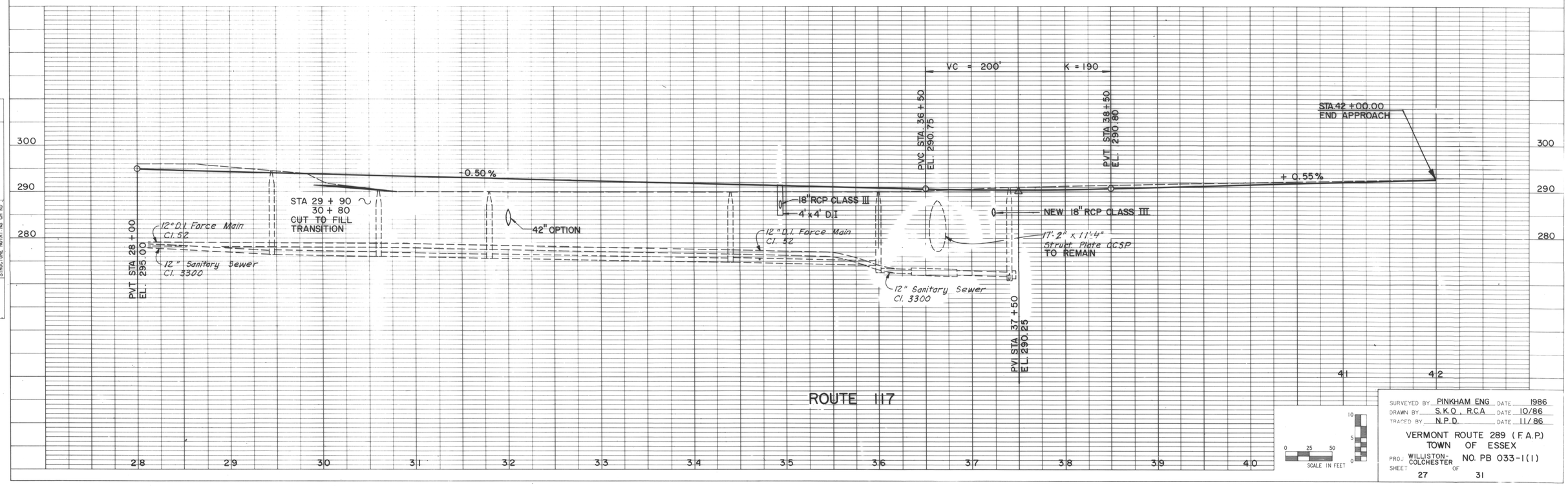
VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX
PROJ. WILLISTON-COLCHESTER NO. PB 033-1(1)
SHEET 26 OF 31

K&E PLATE 1, PLAN-PROFILE
KEUFFEL & ESSER CO.
48 7024 Made in U.S.A.

PROFILE
SURVEYED
PLOTTED
NOTE BOOK
GRADES CHECKED
B.M.'s NOTED
NO.
STRUCTURE NOTATNS CH'KD
BY
DATE



ROUTE 117



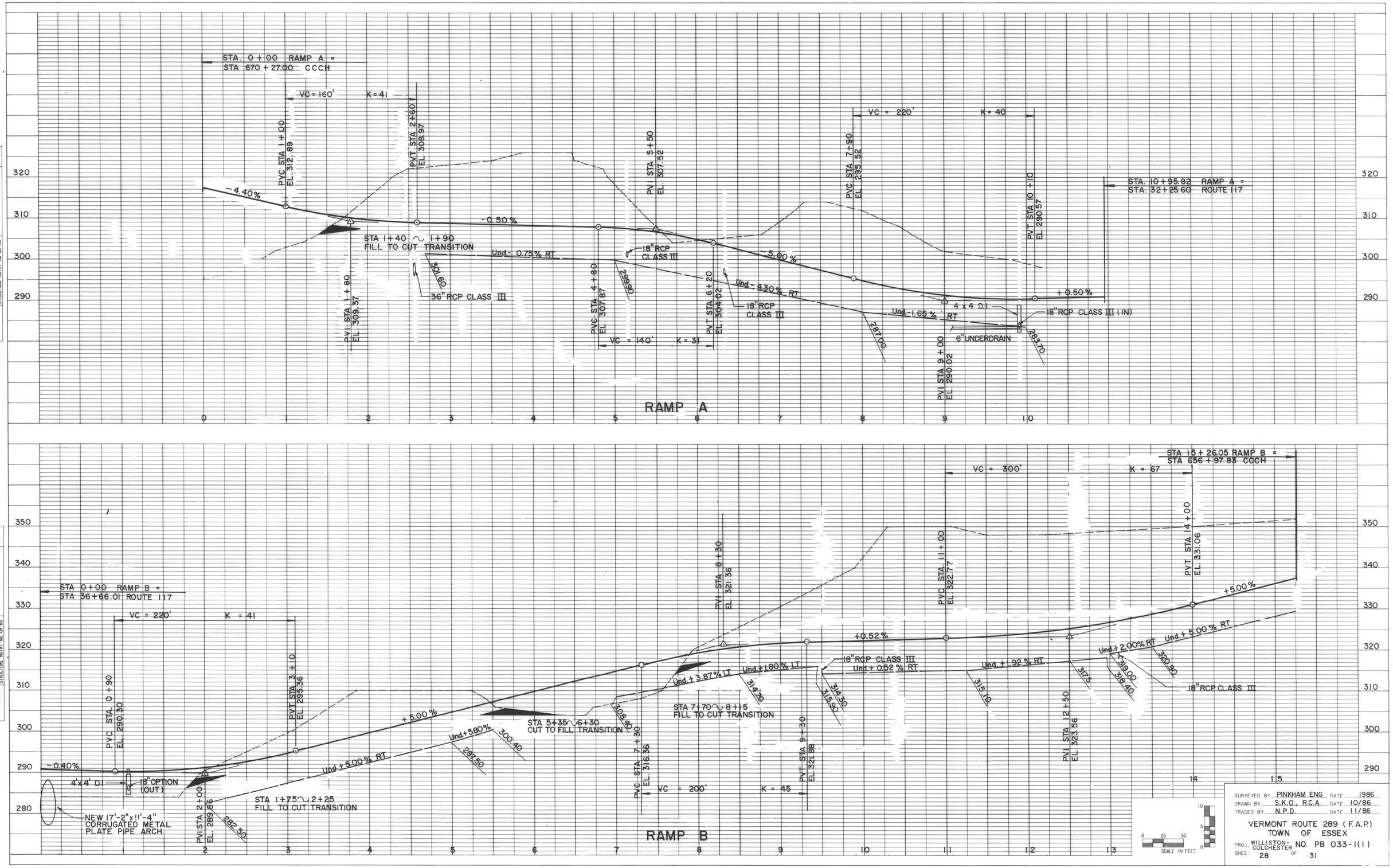
ROUTE 117

0 25 50
SCALE IN FEET

0 5 10

SURVEYED BY PINKHAM ENG DATE 1986
DRAWN BY S.K.O., R.C.A. DATE 10/86
TRACED BY N.P.D. DATE 11/86

VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX
PROJ. WILLISTON-COLCHESTER NO. PB 033-1(1)
SHEET 27 OF 31



SURVEYED BY PINKHAM ENG DATE 1986
DRAWN BY S.K.O., R.C.A. DATE 10/86
TRACED BY N.P.D. DATE 11/86

VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX

PROJ. WILLISTON-COLCHESTER NO. PB 033-1(1)

SHEET 28 OF 31

PROFILE | SURVEYED | PLOTTED | NOTE BOOK | GRADES CHECKD | B.M.'s NOTED | NO. | STRUCTURE NOTATIONS CHKD | BY | DATE

STA. 0+00 RAMP C = STA. 21+92.34 ROUTE 117

VC = 210' K = 31

PVC STA 0+35 EL. 293.07

PVT STA 2+45 EL. 298.11

PVI STA 6+00 EL. 315.86

PVC STA 4+90 EL. 310.36

PVT STA 7+10 EL. 33.44

PVC STA 9+20 EL. 308.82

PVT STA 10+70 EL. 306.29

PVI STA 1+40 EL. 292.86

VC = 220' K = 33'

VC = 50' K = 5

STA. 12+01.06 RAMP C = STA. 867+48.50 CCCH

-0.20%

+5.00%

-2.20%

+1.50%

Und +4.77% RT

Und +2.60% RT

Und +0.40% RT

Und +1.00% RT

Und -1.00% RT

Und -2.20% RT

Und -1.10% RT

Und +0.95% RT

18" RCP CLASS III

286.20

288.80

305.90

306.60

306.50

306.10

301.50

300.40

RAMP C

0 2 3 4 5 6 7 8 9 10 11 12

STA 9+93.24 RAMP D = STA 658+09.79 CCCH

VC = 270' K = 50

PVC STA 10+75 EL. 329.15

PVT STA 13+45 EL. 323.75

PVI STA 15+50 EL. 325.18

-4.70%

+0.70%

-5.00%

-5.20% LT

Und -4.70% RT

Und -9.00% RT

Und -2.80% RT

Und -1.50% RT

Und +0.70% RT

Und -1.20% RT

Und -3.00% RT

Und -4.47% RT

Und -6.80% LT

Und -3.13% LT

Und -5.33% RT

18" RCP CLASS III

30" RCP CLASS III

323.00

318.50

318.70

317.00

315.50

317.80

316.90

316.70

315.20 LT

313.60 LT

309.50 LT

308.50 RT

299.00 LT

295.50

295.50 LT

287.50

PVC STA 12+10 EL. 322.80

PVC STA 14+60 EL. 324.55

VC = 180' K = 32

VC = 130' K = 21

PVC STA 21+25 EL. 296.43

PVT STA 22+55 EL. 293.92

PVI STA 23+90 EL. 293.18

STA. 23+20.42 RAMP D = STA 18+21.63 RTE 117

±1.14%

4'x4' D.I.

18" Culvert REMOVE

18" OPTION (OUT)

48" OPTION

RAMP D

10 11 12 13 14 15 16 17 18 19 20 21 22 23

SCALE IN FEET 0 25 50

SURVEYED BY PINKHAM ENG DATE 198

DRAWN BY S.K.O., R.C.A. DATE 10/86

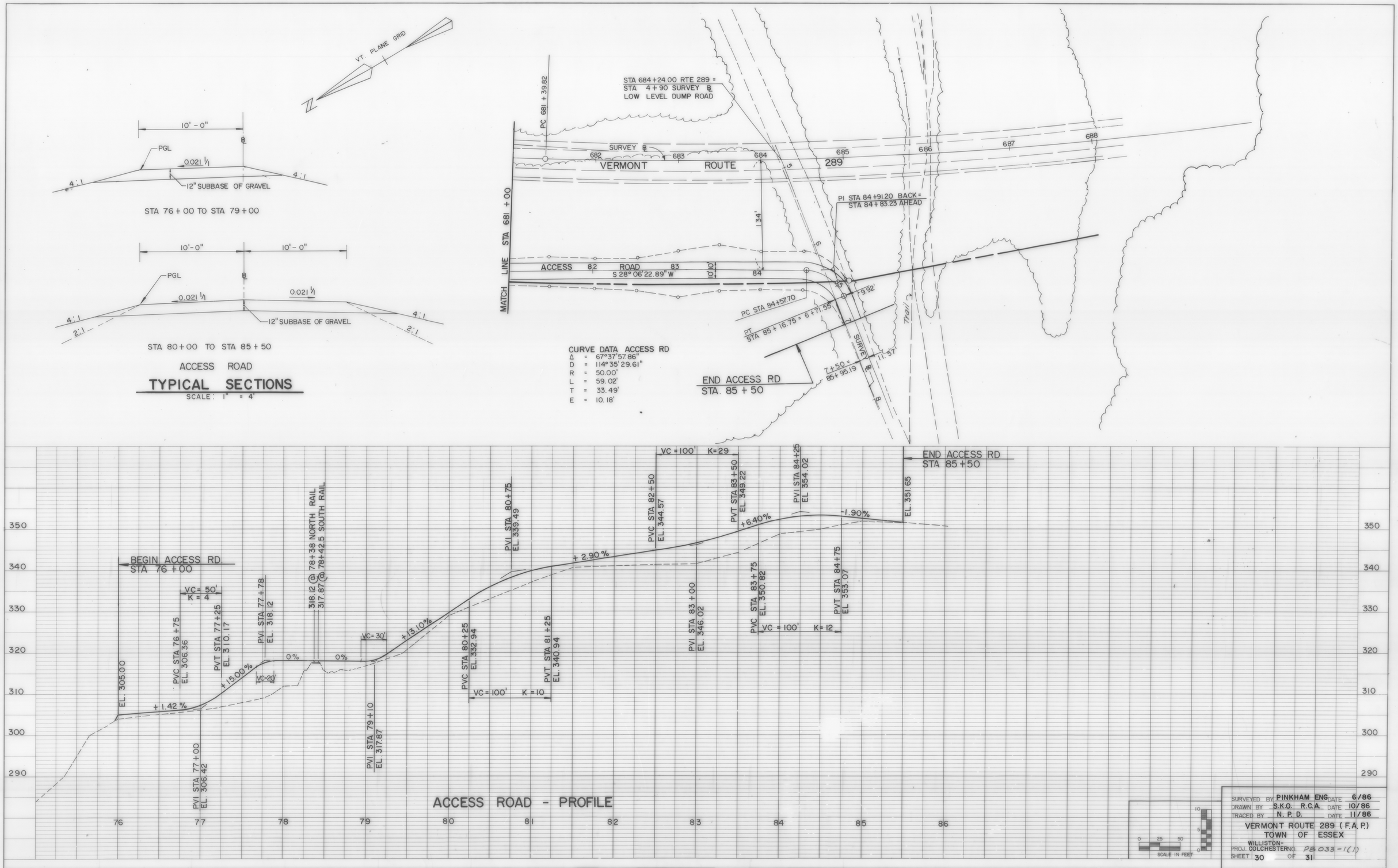
TRACED BY N.P.D. DATE 11/86

VERMONT ROUTE 289 (F.A.P.

TOWN OF ESSEX

PROJ. WILLISTON - COLCHESTER NO. PB 033-1(1

SHEET 29 OF 31



SURVEYED BY	PINKHAM ENG	DATE	6/86
DRAWN BY	S.K.O. R.C.A.	DATE	10/86
TRACED BY	N. P. D.	DATE	11/86

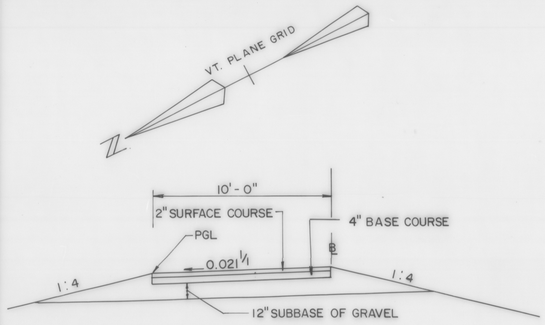
VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX

PROJ. WILLISTON-COLCHESTER NO. PB 033-1(1)
SHEET 30 OF 31

PLAN
NOTE BOOK
No.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT OF WAY CHECKED
DATE

PROFILE
NOTE BOOK
No.
SURVEYED
PLOTTED
GRADES CHECKED
B.M.'s NOTED
STRUCTURE NOTATIONS CHECKED
DATE

Keuffel & Esser Company
48 7024 Made in U.S.A.

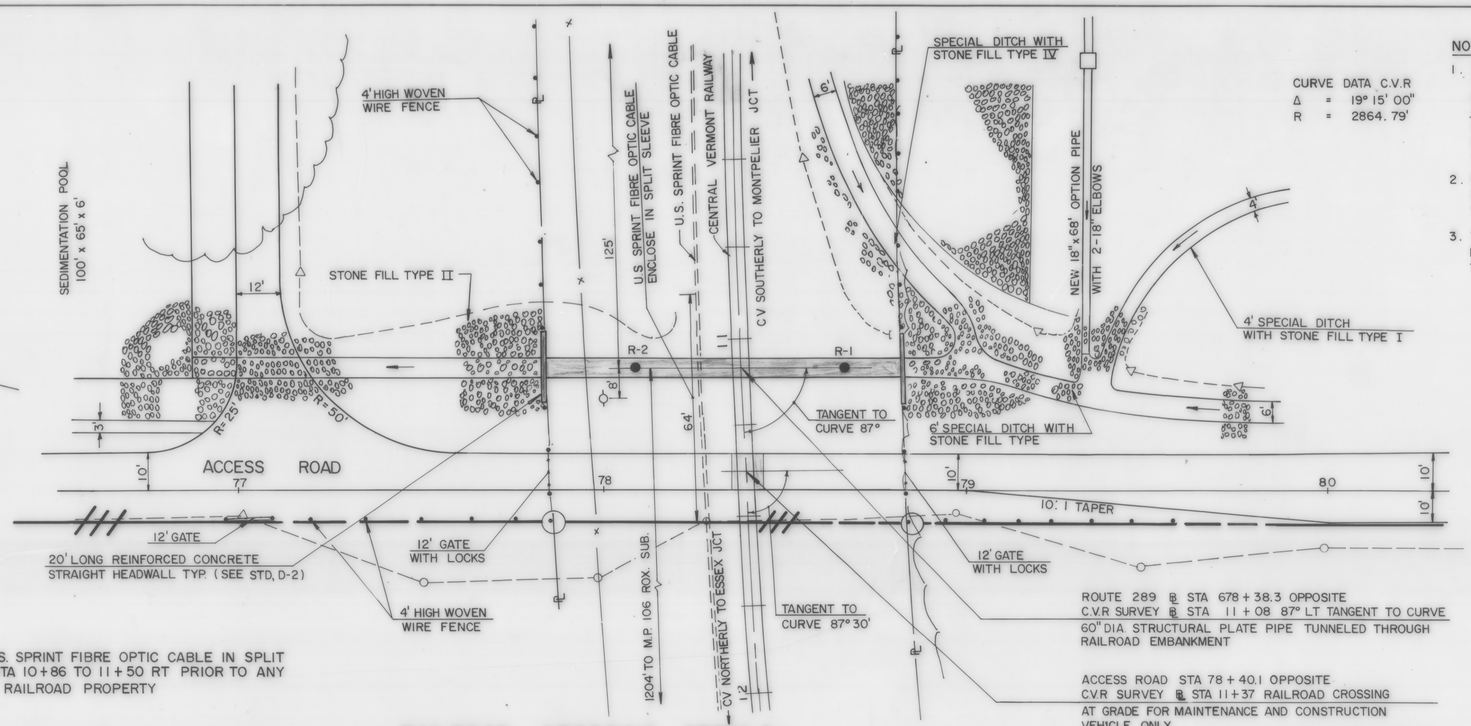


STA 77 +86 TO STA 78 +36
STA 78 +44 TO STA 78 +84

ACCESS ROAD
(WITHIN RAILROAD RIGHT OF WAY)

TYPICAL SECTION

SCALE : 1" = 4'-0"



CURVE DATA C.V.R
Δ = 19° 15' 00"
R = 2864.79'

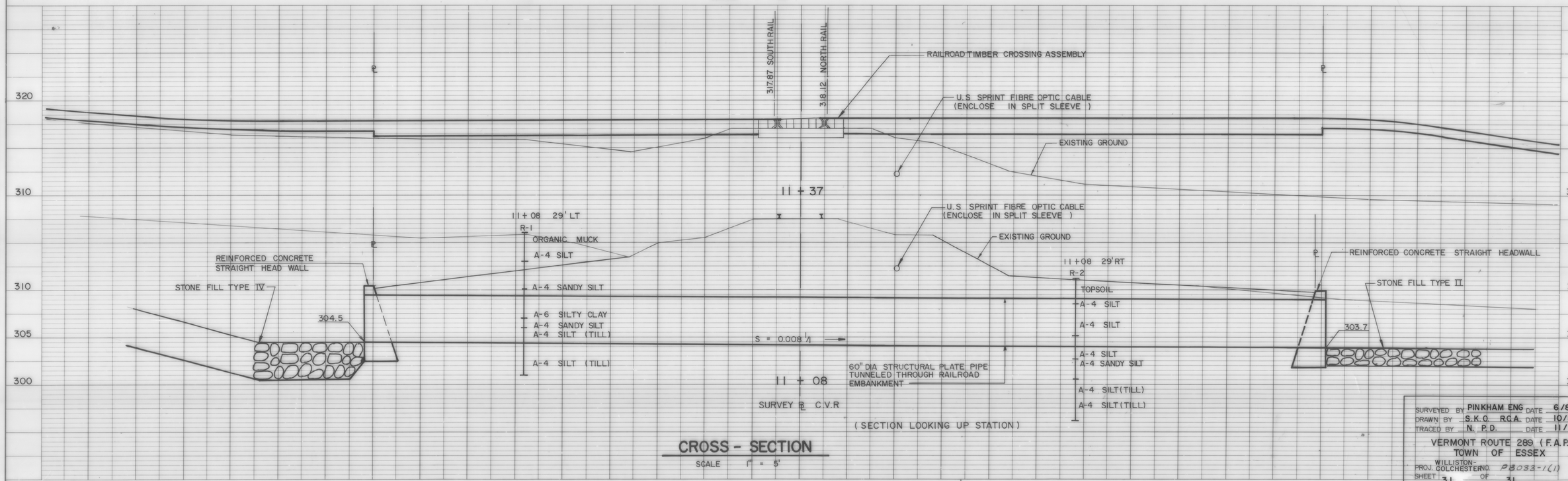
NOTES :

1. THE CENTRAL VERMONT RAILWAY, INC. WILL FURNISH AND INSTALL THE TIMBER CROSSING ASSEMBLY. THE RAILROAD PROTECTIVE DEVICES, SUCH AS, FLASHERS, BELLS AND GATES FOR ACTIVE WARNING DEVICES FOR BOTH SIDES OF ACCESS ROAD CROSSING WILL BE FURNISHED, INSTALLED AND REMOVED BY THE RAILWAY FORCES AND WILL REMAIN THE PROPERTY OF CENTRAL VERMONT RAILWAY, INC.
2. PRIVATE CROSSING SIGNS WILL BE INSTALLED. SECURITY GATES WITH LOCKS FOR THE RAILWAY AND VAOT FOR EACH SIDE OF THE RIGHT OF WAY WILL BE INSTALLED.
3. THE CONTRACTOR SHALL CONSTRUCT THE ACCESS ROAD PAVEMENT AND ROADBED ON EACH SIDE OF THE RAILWAY FROM THE EDGE OF TIE TO THE EDGE OF RIGHT OF WAY.

NOTE:
PLACE U.S. SPRINT FIBRE OPTIC CABLE IN SPLIT SLEEVE STA 10+86 TO 11+50 RT PRIOR TO ANY WORK ON RAILROAD PROPERTY

RAILROAD CROSSING DETAILS

SCALE 1" = 20'



CROSS - SECTION

SCALE 1" = 5'

SURVEYED BY	PINKHAM ENG DATE 6/86
DRAWN BY	S.K.O. R.C.A. DATE 10/86
TRACED BY	N. P.D. DATE 11/86

VERMONT ROUTE 289 (F.A.P.)
TOWN OF ESSEX
PROJ. COLCHESTER-WILLISTON NO. P8033-1(1)
SHEET 31 OF 31

Keuffel & Esser Company
48 7024 Made in U.S.A.